

ARCHAEOLOGY OF  
UMM AN-NAR  
ISLAND

1959 - 2009

WALID YASIN AL TIKRITI



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ARCHAEOLOGY OF UMM AN-NAR ISLAND  
 (1959-2009)

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# INTRODUCTION

The United Arab Emirates and Southeast Arabia in general remained archaeologically speaking, terra incognita until fifty years ago. Explorations in greater Arabia started in the nineteenth century when European travellers first became involved in the region. While archaeological investigations in Bahrain go back to the nineteenth century, and to the first half of the twentieth century in Eastern Arabia, Abu Dhabi remained unexplored until recent times. Indeed, nothing was known about the archaeology of Southeast Arabia which includes the United Arab Emirates and the Sultanate of Oman before the investigations of the Danish expedition which worked at Umm an-Nar in the late 1950s. The Danish explorations were extended to cover the interior of Abu Dhabi in the early 1960's. These explorations which were followed by investigations by local teams, together with those carried out since 1973 by other foreign expeditions in the UAE and Oman, form the present framework for the archaeology of the region. These investigations have revealed archaeological remains of different periods, interrupted by inevitable gaps which result from the nature of the archaeological sites themselves. These Southeast Arabian sites are concentrated in the oases, coastal areas and in the wadis along the obvious trade routes.

The most ancient period represented

so far in Abu Dhabi Emirate is the Middle Palaeolithic (Old Stone Age) which has been recently identified at Jebel Barakah in the western region. The first diagnostic stone artefacts discovered there by the author in 2006 indicate that the site belongs to the early phase of that period (150000-200000 years ago)<sup>1</sup>. Nothing has been discovered so far from the long gap between that remote period and the Neolithic (New Stone Age) which started around eight thousand years ago. By the end of the fourth millennium BC, a few centuries after the invention of first writing in Mesopotamia, the Bronze Age started in Abu Dhabi and the whole of Southeast Arabia. This age covers the whole of the third and most of the second millennium BC and divided into three main phases (Early, Middle and Late). The early phase is represented by hundreds of beehive stone tombs yielding pottery vessels of Mesopotamian origin. The middle phase comprises two cultures (Umm an-Nar and Wadi Suq Cultures)<sup>2</sup>.

This monograph summarises the archaeological investigations and discusses the current state of the sites on the Umm an-Nar Island, which must have lived at least three centuries (2600 - 2300 BC). The Umm an-Nar culture, as indicated from the inland 3rd millennium BC, covers no more than seven centuries (2700-2000 BC). The Wadi Suq Culture

(2000-1600 BC) which inherited the sophisticated culture of Umm an-Nar witnessed a decline, while the poorly represented last phase of the Bronze Age (1600-1300 BC) has only been vaguely identified in a small number of settlements. This last phase of the Bronze Age was followed by a boom when the underground irrigation system (the falaj) was introduced during the Iron Age (1300-300 BC) by the local communities. Unlike the northern emirates little evidence came from the later Hellenistic Era in Abu Dhabi and the period followed (300 BC-300 AD). Pre-Islamic remains are scant while those reported to have been discovered on some islands by Abu Dhabi Islands Archaeological Survey (ADIAS) need further examination. Some of them may well have been of early Islamic or even mediaeval.<sup>3</sup>

Two major Early Islamic sites have been discovered in Ras Al Khaima at Kush and Dubai at Jumairah. No real architectural remains belonging to this period have been discovered in the Emirate of Abu Dhabi, but discovering a falaj dating back to around 1300 years ago in Al Ain indicates that an Islamic settlement must have existed in the region. Abbasid glazed pottery from the ninth and tenth centuries exists in some places north of the Al Ain city, while campsites of Late Islamic date, usually associated with pottery, glass, shells, beads, coins, metal objects, animal bones and other finds are common everywhere.

## UMM AN-NAR SETTING & LOCATION

Around 200 islands dominate the coast of Abu Dhabi which extends 330 kilometres between Qatar in the west and Ras Ghanada in the east, south of Dubai (*Figures 1 and 2*). This coast is featured by sabkha (flat salty areas) which was formed around 4000 years ago by continuous evaporation of the surface water. Width of the sabkha varies from one place to another and reaches to 30 kms or more in the western stretch of the coast. Parts of this sabkha are still vulnerable to sea water encroachment after very high tides with strong onshore gales and rains. Along the western coast there are outcrops, most of which are rich in Late Miocene fossils of vertebrate animals, 6-8 million years old. Some 4000 years ago the island of Umm an-Nar, which is located to the Southeast of the much larger island of Abu

Dhabi, was separated from the ancient shoreline by 12-15 km of shallow water. The present junction of Abu Dhabi, Dubai and Tarif at Mafrq is located immediately on the ridge of the ancient shoreline, and indeed the Abu Dhabi International Airport was built on another stretch of the same shoreline. Many parts of the sabkhas between the present shoreline and the ancient one have been built up recently. When the sea level dropped down about 1-2 metres after the abandonment of the island, by the end of the fourth millennium BC, the shallow creek separating it from the mainland, that once was inundated by sea water, remained. It was accessible only by small boats or wading during the low tide. A causeway was built in 1974 but was replaced by a bridge when the creek was dredged and deepened.



Figure 1: The coastal area of Abu Dhabi. Google satellite image.

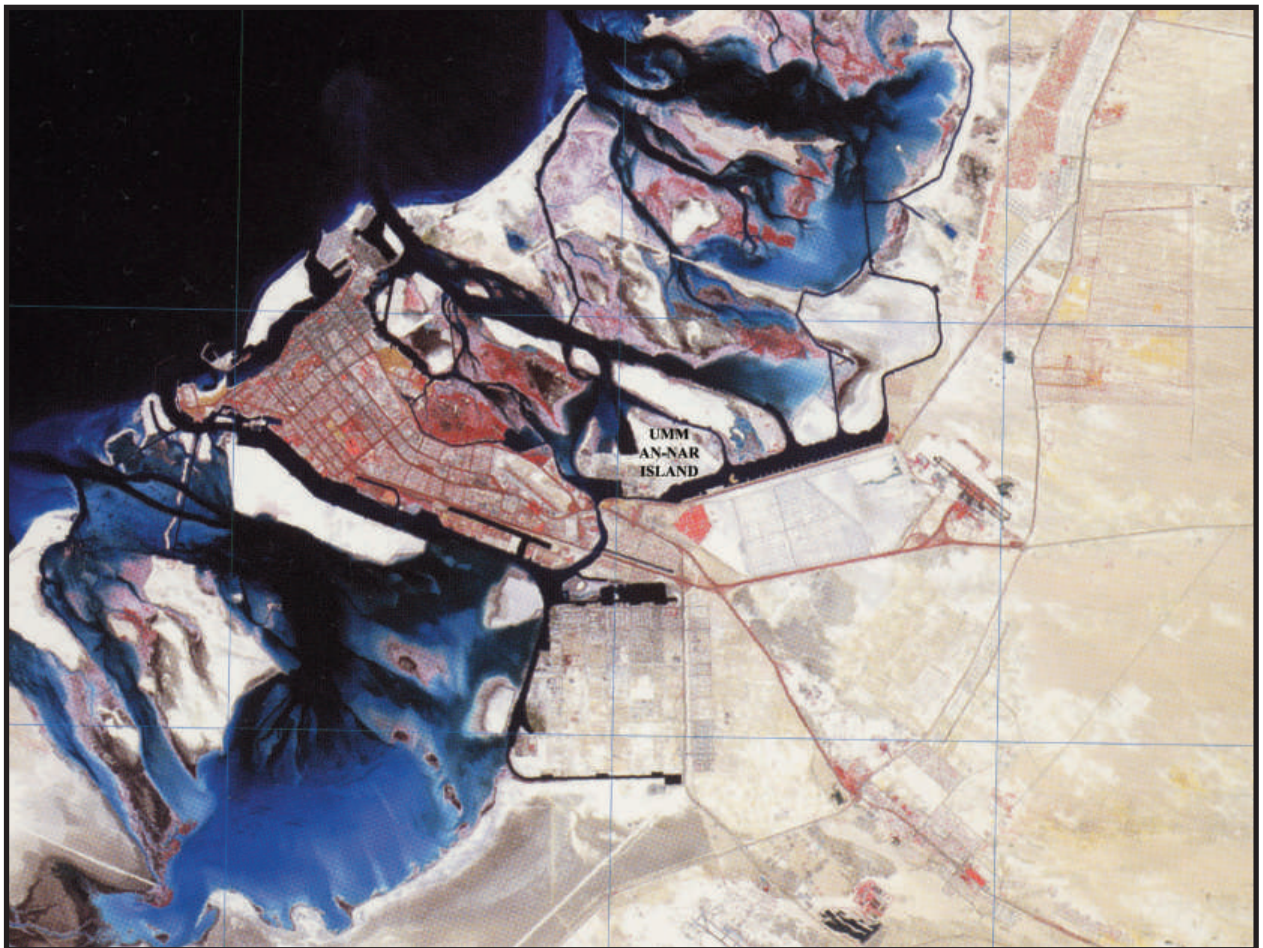


Figure 2: A stretch of Abu Dhabi coast showing the Island of Abu Dhabi and the surrounding islands including Umm an-Nar. Google satellite image.

## TOPOGRAPHY OF THE ISLAND

This small island which was before enlargement only 3 kms long and less than 2 kms wide is different from the rest of the adjacent islands such as Saadiyat, Abu Dhabi, Futaysi and Halat al-Bahrani (*Figure 3*). While these islands are low and mainly sandy, Umm an-Nar is rocky, especially its northern plateau where most of the ancient tombs and the nearby settlement are situated (*Figures 4 and 5*).<sup>4</sup> This plateau, which measures about 530 x 320 metres, consists of limestone with a height of five metres above the surrounding area and 8.5 metres above sea level. The hard and impermeable surface of the rocky section must have assisted in keeping water for long periods of time. The dry gullies which have eroded the edges of the plateau and the small shallow depression between the graves give an indication of extensive rainfall during its long history. An eighty year old cistern, built on a slightly low ground on the plateau with four inlets, is another indication of a relatively consistent water supply during recent years.<sup>5</sup> It has been reported that people of Abu Dhabi island used to row over to Umm an-Nar after each heavy rainfall to collect water because of the absence of any catchment area on their sandy island.<sup>6</sup> The availability of easily quarried limestone, exploited as a main structural material, as well as being the nearest island to the interior

settlements in Al Ain, seem to have been strong reasons for choosing the island for habitation.

Even if the third millennium sea level prior to 4000 BP (Before Present) was 1-2 metres higher than the present level, as has been suggested,<sup>7</sup> Umm an-Nar and the surrounding area of the mainland coast would, to some extent, have been protected from violent wind storms and sea waves by an outer chain of low islands. The channels and shallow tidal embayment between these islands, suitable for local navigation, must also have been taken as a factor in the choice of Umm an-Nar for settlement. Thus in the 3rd millennium BC, Umm an-Nar seems to have had good natural shelter in addition to relatively deep surrounding water. Such a situation is lacking on the western part of the coast. Moreover, some of the adjacent islands were either not in existence at that time, owing to the higher sea level, or were lesser in extent than today.

It should be noted here that the shape of the island today is different from what used to be before dredging the sea and land reclamation, which has been used for industrial and military purposes. The archaeological site however is left intact and well protected.



Figure 3: Google satellite image showing the present shape of the Umm an-Nar Island. The original shape of the island (marked in blue ink) has been incorporated into the boundaries of the new complex. The archaeological site is indicated in red.



Figure 4: Google image showing the archaeological area on the island of Umm an-Nar.

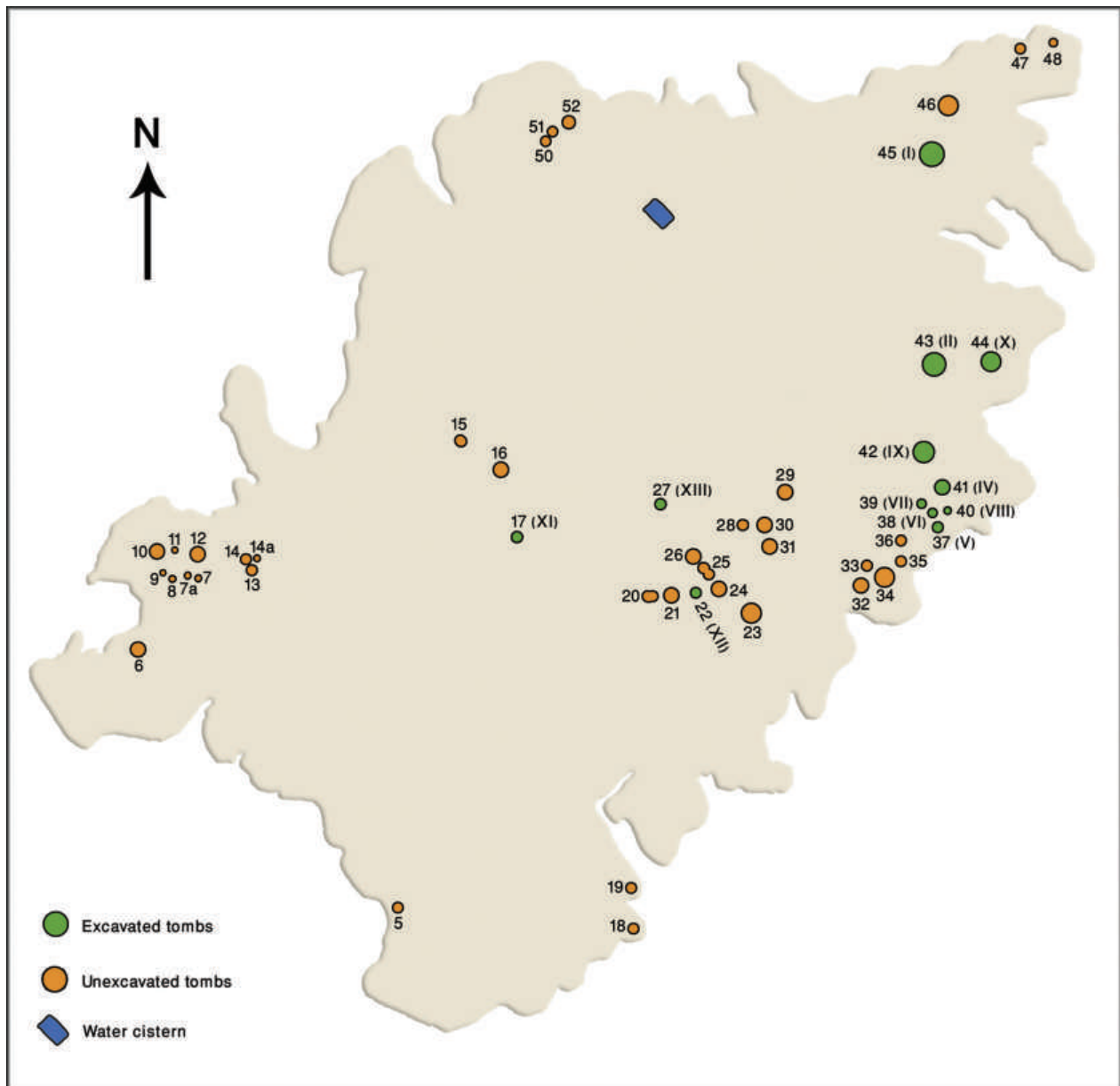


Figure 5: Distribution of the Umm an-Nar tombs on the plateau.

## THE NAME

The name 'Umm an-Nar' is wrongly translated to 'Mother of Fire'. The word 'Umm', in this context means 'place' not 'mother', so the correct translation is 'Place of Fire'.

It has been mentioned in one of the old publications of the Danish team and repeated by the Department of Antiquities and Tourism, and by Dr. Frifelt in her publication on the island (1991: 14) that the island was called so because of the gun flint people of Abu Dhabi were collecting from the island. To me, this does not seem true as flint, in more quantities and better quality, was available on other outcrops not far from Umm an-Nar. The nearest place known to the author was the present location of Abu Dhabi International Airport. Large chunks of flint and nodules were noticed when I walked the area in 1979 looking for stone cairns, just before the construction of the airport. Other areas located in east and northeast Abu Dhabi have more flint than Umm an-Nar. On the other hand, I must also say that the name has nothing to do with the flame of the oil refinery, which was erected on the southern part of the island in 1974, as some people might think.

The name, in my view, must have been known to the inhabitants of Abu Dhabi for many centuries. First habitation on Abu Dhabi, according to Rob Carter, goes back to the first

century A.D.<sup>8</sup> This is based on a small collection of pottery discovered at the Batin area. In recent history, the first tribe which inhabited the Island of Abu Dhabi are the Al Nahyan family, two and a half centuries ago. Being only 2 km from Maqta, the usual crossing to the island of Abu Dhabi, Umm an-Nar must have been visited by the inhabitants of Abu Dhabi but they never lived on it. The only tangible evidence available for repeated visits goes back to eighty years ago when the Abu Dhabi people built on the island a water cistern to collect rain water. The ashes, which must have been the result of a big fire, and the other dark soil, that covers large areas of the settlement, especially Mounds A and B, in my view, is the reason to call the island "place of fire". The bedouins usually use the term 'fire' even if it is dead. It is a connotation for ash or hearths.

It should be mentioned that 'Sas Al Nakheel' is a new name which has been recently given to the island. Archaeologists however should stick to the old name, as Umm an-Nar does not represent a well known type site only but also a culture which covers several centuries of the ancient history of Abu Dhabi, U.A.E and the whole region. Internationally speaking, the name 'Umm an-Nar' is the one used by archaeologists.

## HISTORY OF INVESTIGATIONS

The first archaeological excavations in Abu Dhabi began at Umm an-Nar in 1959, twelve years before the foundation of the United Arab Emirates. Seven tombs out of fifty and three areas at the ruins of the ancient settlement were examined by the Danish Archaeological Expedition. According to the most recent information presented by Dr. Fleming Hojlund at a conference held in Abu Dhabi in March 2009, Sheikh Shakhboub, the then Ruler of Abu Dhabi, invited the Danes, who were digging in Bahrain and asked Tim Hillyard to liaise with them. Hillyard was an amateur archaeologist working as a representative for Abu Dhabi Marine Areas (ADMA), an oil company in Abu Dhabi. He arranged a visit to Professor P.V. Glob and Geoffery Bibby to show them the island in February 1958.<sup>9</sup> During that visit they identified a few exposed shaped stones fitted together at some of the stone mounds. The following year (February 1959), the first excavations started at one of the mounds on the

plateau, now called Tomb I. Two more seasons (1960 and 1961) were carried out digging more tombs, while the last three seasons (1962/1963, 1964 and 1965) were allocated to examine the settlement.<sup>10</sup>

The Danish excavations on Umm an-Nar halted in 1965 but were resumed in 1975 by an archaeological team from Iraq. During the Iraqi excavations which lasted one season, five tombs were excavated and a small section of the village was examined. To meet the requirements of the writer's Ph.D thesis and to answer some of the pending questions the author of this monograph carried out limited excavations at the settlement, uncovering a number of rooms in the space between the Danish and Iraqi excavations. I should also mention here that between 1970 and 1972 an Iraqi restoration team headed by Shah Al Siwani, former member of the Antiquities Directorate in Baghdad, restored and/or reconstructed the Danish excavated tombs.

## THE SETTLEMENT

The archaeological sites on Umm an-Nar are confined to the northern part of the island where remains of a third millennium BC settlement and a cemetery of fifty collective graves are located. The tombs are distributed all over the plateau while the settlement area is located to the east and north-east of the tombs on a lower ridge, which was just above sea level in the 3rd millennium BC. It seems, that the irregular shape of the settlement has largely followed the original shape of the ridge upon which it was built. The settlement was originally divided into three main areas by the Danes. These are called 1013, 1014 and 1019. These numbers were given to define the trenches the team excavated rather than defining the topographical features of the site. Nevertheless, surveying and planning carried out in 1979 by the author showed that the settlement of Umm an-Nar consists of three mounds:

Mound A (1014), is the largest which seems to have been the nuclear part of the settlement and probably the earliest. The southern section of this mound was extensively occupied. In this location, the debris is 2.25m in depth but it is much shallower in the northern side. Traces of fire places can be seen on the narrow ridge and the northern tip of the mound. The Danish excavations at this mound revealed a well preserved house but without defining the exterior walls (*Figures 6 and 7*).

Mound B (1019), located to the north west of Mound A, is separated from it by a narrow flat sabkha. Debris here may have been a result of an extension of the nuclear settlement. Such growth may have occurred not very long after the construction of the site as both mounds reveal the same cultural horizon. The shallow debris of Mound B, especially its northern part, would seem to indicate a short habitation. Traces of walls forming large rooms, reminiscent of the house excavated at Mound C, are visible on the surface.

Mound C (1013), located at the extreme southern margin of the settlement, seems to have been the site of one large building already excavated and the remains of another one. Because of the regularity of the excavated building which has several large rooms and the discovery of lids for large storage jars it has been described by the Danish excavators as a 'Warehouse'. The size and regularity would also lead to think that this building must have had a special importance, perhaps an administrative function, as well.

It should be noted here that the three mounds were originally connected and formed one village but they were disconnected after the abandonment of the settlement, by gullies created as a result of the rainfall coming from the adjacent plateau. Among the surface materials collected from these three mounds pottery, scraps of copper,



Figure 6: Plan of the House Complex excavated by the Danish Archaeological team at Mound A (Area 1014). After Frifelt 1995.



Figure 7: The House complex after restoration. Looking NE (photo 2009).

various shells belonging to different species, stone sinkers (weight) and many fragmented bones dominated by dugong (kind of a sea cow) and turtles. There are no comparable surface finds in the tombs area.

In mound A, the first mound to be tested by the Danes, an incomplete test trench (east-west) dubbed 1014 was excavated.<sup>11</sup> A nearby area measuring 10 x 13 m. was chosen for excavations. Due to the walls and number of rooms discovered this area was called the 'House Complex' by the Danes.

Very limited excavations were carried out at Mound B where only parts of the exterior walls of a house or more were uncovered by the Danes. Like the rest of the settlement these walls are built of rough stones. In one of the walls excavated an entrance was discovered but the excavators did not enter into the structure. The Danish excavations were halted in 1965 as the team preferred to move to excavate in Al Ain to search for contemporary sites. They never went back to the island [for more details about the excavations at Mound B (1019) see Frifelt 1991, 116-120]. Just to the west of the house excavated by the Danes at Mound B there is a small hummock which seems to have been occupied by another building unit. Further to the north, there are remains of what look like three other units, originally, may have belonged to one large occupation. Two of these units are shallow because

they are located on a slightly high ground which is prone to rain water that must have washed away most of the walls. The third unit is located on a lower ground to the east, just above the sabkha. Archaeological remains here are shallow as well, but they are better preserved than those of the last units.

In Mound C, where most of the remains were excavated, the Danish team uncovered a large house measuring 16 x 16 m. (called 1013). The house has seven large rooms built of stones (*Figure 8 and 9*). Most of them measure 11 x 3 m. It has been reported that clay was used as mortar for the flat block of the limestone as well as plastering. My work at Mound A however showed that the quality of mortar used was very poor and mixed with organic remains, usually fish and small bird bones. I should also mention that during the restoration work we carried out at the 'Warehouse' in 1994 and 1995 and while cleaning the top courses of the walls we noticed the same phenomenon. The explanation is that builders dug out in the remains of the early layer of the site, which was void of stone structures, and used their debris as mortar. I must also mention that the posthole discovered by the Danish excavators in some rooms of the Warehouse, dug out in the bedrock, may have belonged to the earlier layer that preceded the house; the campsite.

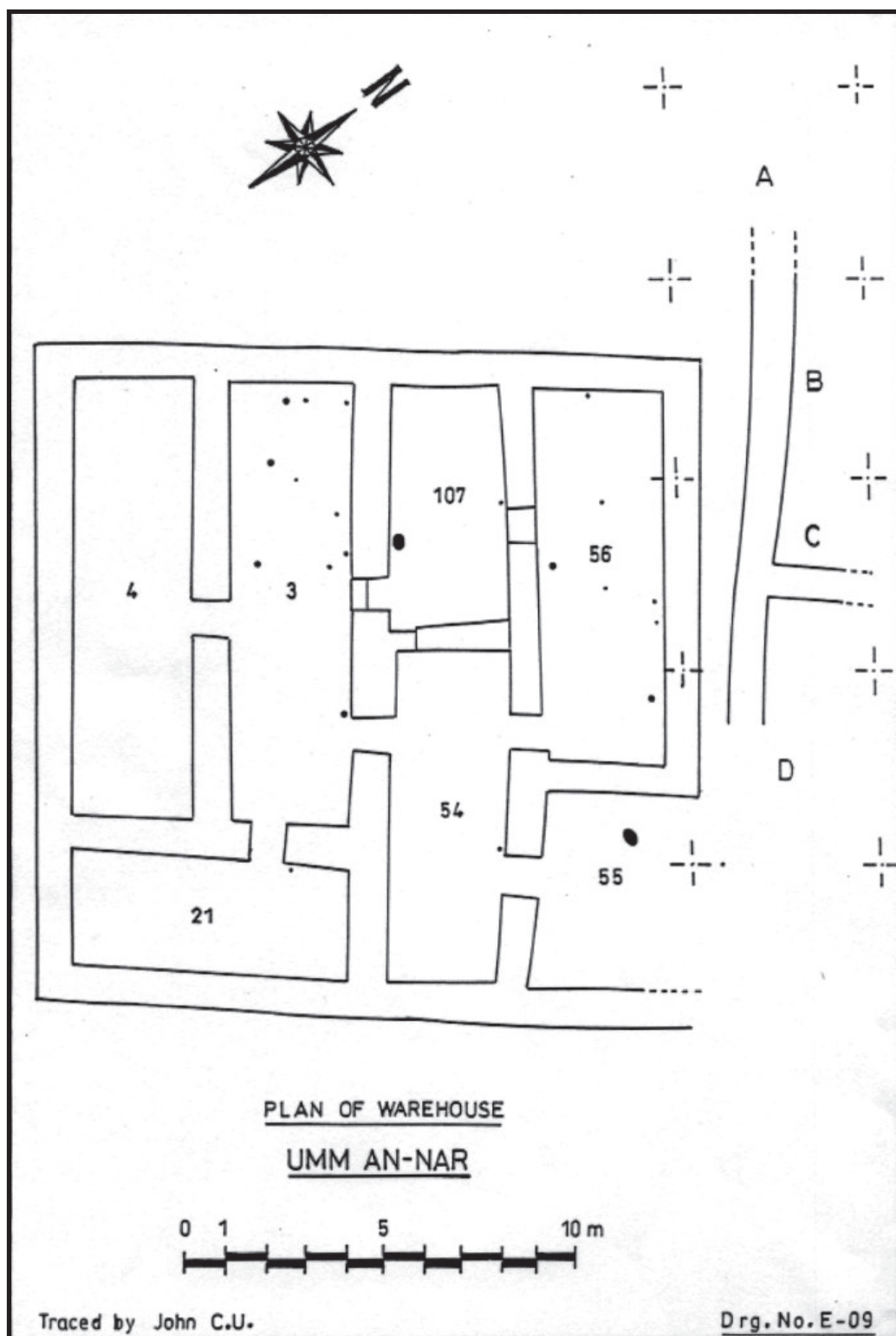


Figure 8: Plan of the Warehouse (based on Frifelt 1995) and the remains of another adjacent structure. The badly eroded structure on the right may have had a similar plan.

The Danes have suggested that the upper portions of the walls of the 'Warehouse' which they found were preserved up to less than a metre, may have been made of mud bricks. To the best of my knowledge no remains of mud bricks were discovered in or outside the house, therefore other construction perishable materials may have been used instead. For the houses at Mound A this is definitely not the case as some of the walls were found preserved up to a height of 1.50 metres. Moreover, the number of the fallen stones collected during the excavations at this section of the site is large enough to add another metre on the existing height.<sup>12</sup> Two and a half

metre high walls, or even less, are high enough to put a roof on them, whether flat or not. We should not completely exclude the possibility of having roofs, raised on a ridge pole lengthwise and slanted on the side walls.

The reasons that led the Danes to call this structure a 'Warehouse' are the large size of the rooms, the discovery of large fragments of pottery belonging to large storage jars and the round jar lids. Another evidence for a long distance trade is the discovery of a small fragment of pottery with impression of a cylinder seal. This seal impression is of Mesopotamian or Syrian origin (*Figure 10 - 10a*).



Figure 9: The Ware house excavated by the Danish Archaeological team at Mound C (Area 1013). Looking south.

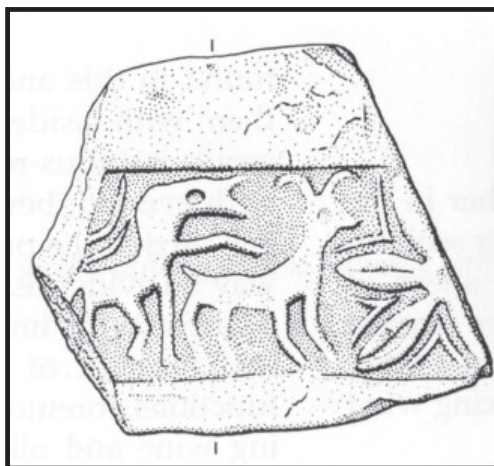


Figure 10: Impression and photo of a cylinder seal from the Ware house.



Fig 10a.

## THE SANCTUARY

The Iraqi excavations at the settlement were confined to a small area of about 42 square metres on the western side of Mound A. In this area the team seems to have hit one of the most significant spots in this mound. The single room (R 14) the Iraqis uncovered in this area seems to have been, in my view, a ritual centre. Some enigmatic stones cut in different shapes were placed in alignment along the southern wall of the room (*Figure 11*). These may have been only orthostats or may have represented idols. At least one of these stones may have been used as a base for a statue. One stone, much eroded, gives the impression that it may have represented an idol (*Figure 12*). Another stone (0.56 x 0.31 m) was found lying in the nearby dump, which must have come originally from the same room, shows a naturalistic representation of a human figure (*Figure 13*).<sup>13</sup> If this interpretation is correct this sanctuary

would be the most ancient known so far in the U.A.E.<sup>14</sup> What supports the existence of an old sanctuary on Umm an-Nar is the following statement of Dr. Frifelt: “ We know from the late Sheikh Shakhbut, the ruler’s brother, that during his father’s reign stone figures had been found on the island, but naturally these idols had been destroyed and thrown away”. This opinion, has been reinforced by the discovery of an upright carved stone and another flat one attached to it, which may have served as an altar (*Figure 14*). This ‘altar’ which was discovered in a small room (Room 11) adjacent to the sanctuary during my excavations of 1979 is very much similar, but smaller, to another one discovered by the Iraqis (*Figure 15*). Unfortunately, the one discovered by the Iraqis and the ‘idols’ have been badly eroded during the last 35 years.



*Figure 11: The Iraqi excavated room (sanctuary) after excavations.*



Figure 12: An Idol stone figure shaped-in-round discovered inside the sanctuary.



Figure 14: An altar discovered in Room 11 next to the sanctuary. A similar altar but larger was discovered in the sanctuary.



Figure 13: Human figure executed in relief found in a dump outside the sanctuary. Head is missing.



Figure 15: The main altar discovered by the Iraqi archaeological Expedition in the sanctuary room.

# THE AUTHOR'S EXCAVATIONS

The author's excavations on the island, which were carried out in February and March 1979 at Mound A, aimed to obtain a more comprehensive idea of the architectural plan of the site and to learn more about the material culture of the settlement\*. In order to throw more light on the sequence of occupation and its extension, a trench linking the Danish excavations and the Iraqi one was opened. The possibility of establishing a local chronology for the settlement was foremost in my mind in choosing this area. In this trench thirteen rooms were partially uncovered. The unexcavated portions of these rooms were badly eroded when a decision was taken to restore

these rooms in 1995. We cleared the eroded sections and had to complete their plans (Figure 16, 17 and 17 a).

To summarize the results of the author's excavations it should be noted that the site - at least at this point - was occupied by two main layers, the upper layer which all the stone buildings belong to, and the lower one which is void of any structures. This is explained in figure 18 which shows a thick upper layer (layer 2) and a thin lower one (layer 1). The upper building layer has two phases identified in some rooms by either the addition of new walls against the old ones, or blocking the entrances (Figure 19) or, in a few cases,

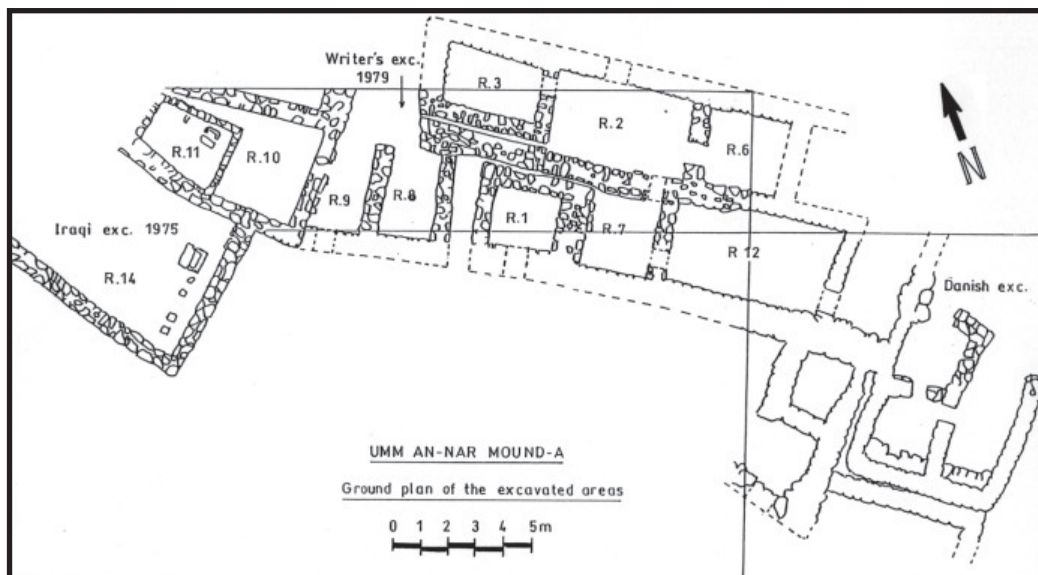


Figure 16: Plan of the author's excavations at Mound A in relation to the other excavated areas. Drawing by W. Al Tikriti.



Figure 17: Aerial view of the excavated areas in Mound A.



Fig 17a.: The author's excavations. Looking east towards the Danish House Complex.

\* The work permit at the settlement of Umm an-Nar was kindly granted by Saif bin Ali Al Darmaki, the former Undersecretary of the Department of Antiquities and Tourism. Kadhim Al Rubai'e, the former Manager of the Al Zahra Company generously, provided two labourers. Mohamed Hassoun, the former Manager of the Al Ain Ice Factory, provided transport whilst Asim Hannoun facilitated accommodation in Abu Dhabi. To them all I am much indebted.

Figure 18: Section throughout the southern side of the trench opened by the author at Mound A showing the architecturally rich upper layer and the thin lower layer without stone structures. Drawing by W. Al Tiferiti.

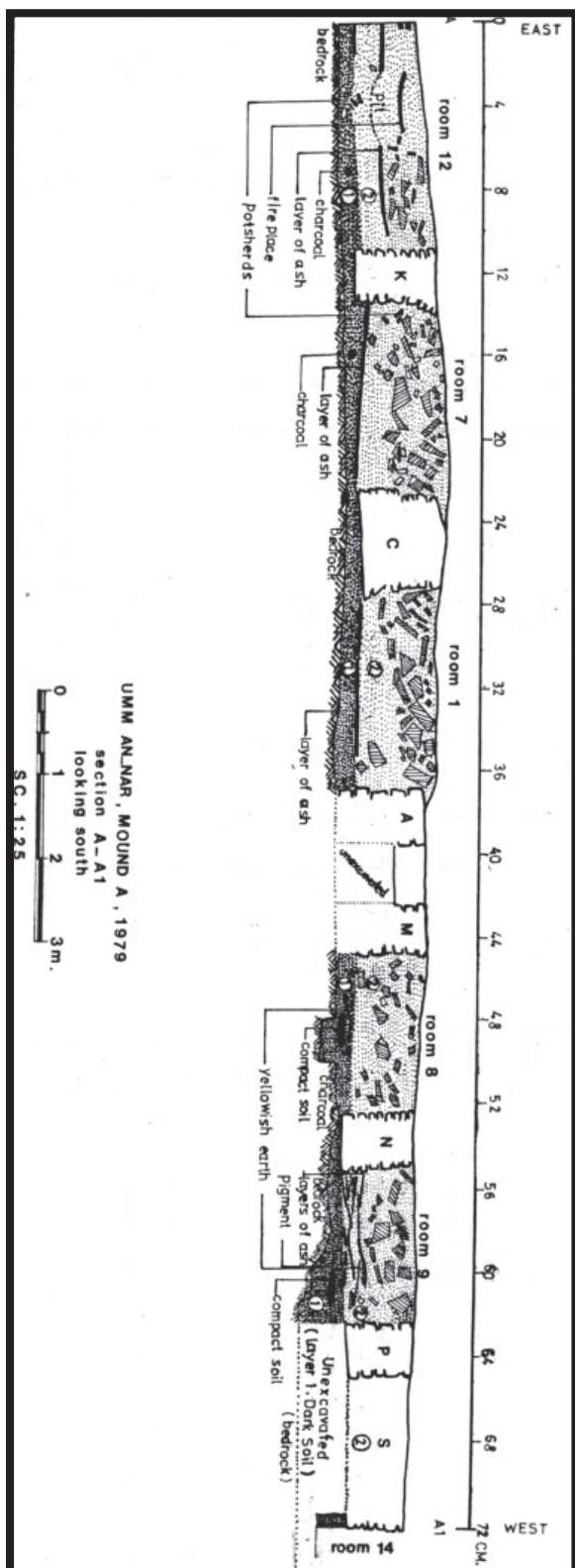




Figure 19: Blocked entrance at the Complex house-evidence for sub-phases.

superimposing a few courses of stones on the top of the earlier ones.<sup>15</sup>

The lower layer was heavily occupied by debris rich in finds but without any architectural remains. My interpretation is that the first inhabitants of Umm an-Nar may have lived in huts which leave no traces when they disintegrate. Ashes discovered in the lower layer may have been caused by large scale fire that destroyed these huts. Whatever the reason for such destruction or abandonment of this layer was, it seems that such huts or camping sites were replaced by a completely different type of architecture that appeared suddenly in the second layer. We should keep in mind however that the campsite was replaced in favour of stone buildings because of the boom in the economy when the copper trade with Mesopotamia thrived.<sup>16</sup>

The finds of the upper layer includes pottery of mainly coarse types, a few fragments of fine black-on-red ware, copper objects such as borers, fishing hooks, rivets and a knife blade (Figure 20).



Figure 20: Copper objects from the Complex house.

A good number of grinding stones and an elaborate pestle were also found (Figure 21).



Figure 21: Pestle from the Complex house.



Figure 22: Spindle whorls made of bones.

Spindle whorls made of camel bone are well known at the settlement of Umm an-Nar (Figure 22).

These were made from camel capita femorum. Evidence for this is a headless femur of a camel with traces of an even cut. This indicates, according to Frifelt that objects like these were locally made. A few curved querns were uncovered in the site but their presence does not necessarily suggest an agricultural community. The inhabitants of Umm an-Nar practiced fishing as indicated by the fishing hooks and the large number of the net-sinkers (weights) discovered (Figure 23).



Figure 23: Net sinkers (weights) made of limestone-evidence for fishing.

These are made of local limestones and they are mostly found in the lower layer and also known in the early phase of the upper layer.

It should be mentioned however that a few sinkers made of hard pebbles, usually with two notches and a pecked groove going round the middle have also been found. It seems that the function of the groove and the notches was to hold the string. At least five of these were uncovered during the restorations carried on the settlement in 1996 and 7 (Figure 24).



Figure 24: Net sinkers made of hard stone. Sinkers like these are usually found in the fifth millennium BC sites.

Sinkers like these are well known in the al-Ubaid related sites of the fifth millennium BC, therefore we consider them as reused objects, rather than made during the Umm an-Nar Period. In her publication of 1995 (Figures 297 and 298) Frifelt refers to another five objects of the same type discovered in Mounds A and B and she considered them as clubs or perhaps net-sinkers.

According to Frifelt these are made of 'ultrabasic rocks'. The presence of this number of re-used objects in the ruins of Umm an-Nar indicate that they may have been taken from a nearby fifth millennium BC site.

Organic remains were collected in order to examine the environmental aspects of the island during the 3rd. millennium B.C. and to understand the economy. Around 50 kilos of animal bones were recovered during the author's excavations. These bones were found scattered in the debris of all the rooms and not from a particular one. Only a few samples were sieved and from these a large quantity of fish bones were recovered. The bone collections retrieved by the Danish excavators and myself were studied by Ella Hoch of the Geological Museum, Copenhagen. Professor Hans-Peter Uerpmann and Dr. Margarethe Uerpmann examined further collections made later from the same site.<sup>17</sup> Marine and terrestrial animals were identified. Different species of fish have been identified. Dugong and turtle bones (*Figures 25- 27*) are common among the marine animals while camel bones are well represented among the terrestrial ones.

According to Dr. Ilse Kohler and Professor Hans-Peter Uerpmann who studied the camel bones from Umm an-Nar no traces of load wear usually discovered on the limp bones of some



Figure 25: Ribs of a dugong from the settlement.



Figure 26: Incomplete skeleton of a modern dugong.



Figure 27: Turtle bones are a few among many other marine animals used for diet. Shell bone.

beasts of burden were noticed. It is agreed that the camel domestication began around the eleventh century BC but we should not exclude the possibility of finding evidence for earlier attempts to domesticate the animal which requires different procedures from domesticating a goat or an ox. The biological evidence, in my view, does not always apply on defining the domestication of such an animal, which needs to be semi free even if it is domesticated. Archaeological evidence (a harnessed camel figurine) such as that discovered at the Iron Age site of Muweilah,<sup>18</sup> which was taken as definite evidence for domestication might come to light from a Bronze Age site or even earlier in the future (For details about the subject see the paper of Professor H-P Uerppmann and M. Uerppmann 'The appearance of the Domestic Camel in Southeast Arabia', in *The Journal of Oman Studies*, Vol. 12: 235-260). We should also add here that rock carvings sometimes showing hunting scenes by people riding camels are usually considered of Islamic or Iron Age eras, which is true, but archaeologists should not completely discard the possibility that some of them being of older date.

Different varieties of shells were

also common on the Umm an-Nar settlement. The most interesting type is a pear-shaped shell with a long tapering end and a total length of 4.5-7 cms (*Figure 28*).

This is identified as *fiscus fiscus* (Linnaeus) and is widespread in the Indo-Pacific. The type is well known in the 3rd millennium B.C. tombs on Umm an-Nar, Hili and Oman, but completely absent from the Early Bronze Age tombs at Hafit. In other words, the presence of this type of shell has become a characteristic feature of the 3rd millennium tombs in Southeast Arabia. Shells like these may have been used as feeders for children.

One of the substances that was extensively used in the settlement of Umm an-Nar is bitumen. Some fragments bear plant imprints; others are plain or made in small lumps (*Figure 29*).<sup>v</sup> We agree with Frifelt that bitumen was used in nearly all the rooms excavated. During our excavations of 1979 and the restoration activities carried out in mid 1990s large collections were made. Analysis carried out on samples from the Danish excavations and ours by Professor J. Connan show that this substance was imported as raw material from Mesopotamia.<sup>19</sup>



Figure 28: These long tapering end shells of a type called *fiscus fiscus* Linnaeus are well known in the Umm an-Nar graves. They may have been used as feeders.



Figure 29: Fragments of bitumen from Mound A.

## THE CEMETERY

On the plateau (530 x 320 m.) dominating the northern part of the island fifty tombs are located scattered all over the area. The most important of these are concentrated on the eastern ridge of the plateau (*Figure. 30*). The rest which seems less important, judging from the structural viewpoint, are scattered in many places on the plateau, especially the central and the southwestern sections. Only three tombs are located on the southern and southeastern ridges. Another three are also located on the northwestern part of the plateau. The latter were not included in the Danish catalogue as they went unnoticed due to their shallow remains (see attached catalogue). On the southern outcrop located south of the plateau outside the protected area there were tombs (nos. 1-4 according to the Danish catalogue). There is no

evidence of using dressed stones in any of them. These were destroyed during the construction work of the Umm an-Nar Oil Refinery and none of them was excavated.

One more isolated tomb was located on the northeastern ridge of the island at a distance of about 100 metres from the northern edge of the plateau. The ridge where this isolated tomb was located, was partly separated from the main plateau by a flat sabkha which seems to have formed a creek in the third millennium B.C. Road construction in this particular area led to the destruction of the above-mentioned tomb and the ridge. The new installations and dredging have completely changed the landscape of the whole island.

As it has already been mentioned, P.V.



Figure 30: The northeastern section of the cemetery and the settlement of Umm an-Nar as it is shown by google satellite image.

Globe and T.G. Bibby, were the first two archaeologists to visit the site in 1958. The following year they started an exploration programme which was ended in 1965 after carrying out six short seasons, uncovering seven tombs (I, II and IV- VIII) and digging at the settlement.<sup>20</sup> Ten years later (1975) the Iraqis spent one season (April-June) digging five tombs (IX - XIII) and opening a small area at the settlement. The preliminary results of the Danish excavations were published in KUML 1962, 1964, 1966 and 1970.<sup>21</sup> An informative report on the Umm an-Nar tombs was published by Knud Thorvildsen in the 1962 volume of KUML. The report was published in Danish and English. In her paper of 1975, Dr. Frifelt published some results from these excavated tombs and the settlement (see East and West 1975: 359-424). Dr. During Caspers has also published her studies of the Umm an-Nar materials in Origini of 1970 (see bibliography). Results of the Iraqi excavations have not yet been published but I managed to extract some information from two of their internal reports and the catalogue of the discovered objects, as well as from the personal observations I made during my various visits to the island. The above mentioned publications by the Danes, however, have been amalgamated and published in two separate well illustrated volumes by Frifelt. The first volume (1991) discusses the tombs while the second one (1995) deals with the settlement. Frifelt, who had never worked on the island, did extremely well in putting the details of the excavation results in these two volumes, supported by drawings and many black and white

photos. Two separate catalogues, one of graves and the other of objects discovered from them have been incorporated in the first volume.

The aim of this section is to summarize the results of the Danish excavations at the tombs and to present the limited information available to the author about the results of the Iraqi excavations. Before doing so, I should mention that, in my unpublished Ph.D thesis,<sup>22</sup> I have divided the tombs into three different types, therefore, I shall present these tombs accordingly :

**Type A** is characteristic of its sophisticated architecture with ring walls built of carefully shaped stones fitted together without using mortar, ranging between 6 - 12 m. in diameter. The interior of the tombs belonging to this group comprises 4 - 10 chambers. They always have two entrances.

**Type B** is built of rough stones. It has smaller diameters ranging between 5.5 and 8.5 m. with less chambers and has no dressed stones. They may have one or two entrances.

**Type C** is a single burial chamber built of rough stones with an exterior diameter between 2 and 5 metres. Graves belonging to this type have one entrance.

Five tombs of type A (I, II, V, IX and X) have been excavated while two of type B (IV and VI) were uncovered. Of the third type (type C) five tombs have been excavated. The majority of the unexcavated tombs (37) belong to type C. The following are the excavation results:

# TYPE A TOMBS

Tombs I, II, V, IX and X

## Tomb I\*

This tomb is a circular one, eleven metres in diameter with a ring wall of one metre wide resting on a low plinth of flat stone blocks (*Figures 31*). The outer face of the ring wall was built of carefully shaped limestone slabs with horizontal and vertical curves. The interior section of this tomb, as well as the other tombs was built of unshaped stones. Here the interior walls were found preserved up to 1.50 m high while only one course of dressed stones measuring 0.5 - 1 m of the ring wall was left in situ. Ring

walls of Umm an-Nar tombs are always described as having double walls. The two unbonded walls are the result of using two different shapes and size of stones, i.e. large wedge-shaped stones from outside and smaller rough ones from inside. The tomb has been reconstructed and has three courses standing 1.50 m above the plinth, but the original height must have been no less than two metres. I counted around 26 dressed stones not used by the restorer scattered outside the tomb.



Figure 31: Tomb I after reconstruction. Photo by Abdullah Khamis.

\* According to Thorvildsen's grave list published in Frifelt's volume of 1991 this is recorded as Grave 45 and registered no. 1010.

The ground plan is divided into two sections separated by a narrow north-south passage (*Figure 32*). Each section is sub-divided into four chambers by a cross wall running between the ring wall and the passage wall, and a north-south curved wall. The interior walls (running north-south), stop at a distance of about one metre from the ring wall allowing access to the eight chambers. This tomb, as evidenced by the way the interior walls were built and the two sections of tombs IX and X, excavated by the Iraqis, must have had a corbelled roof. The floor of

tomb I, especially that of the passage separating the two sections, had been paved with flat slabs. It should be noted however that we are not sure if the passage way was originally blocked in the middle, like the other tombs of similar ground plan, such as tombs II, IX and X. The discovery of stone slabs covering most of the central passage way (*Frifelt 1991, figure 9*) gives the impression that this tomb may have had two levels. Two story tombs are known both on the island of Umm an-Nar and at Hili in Al Ain.

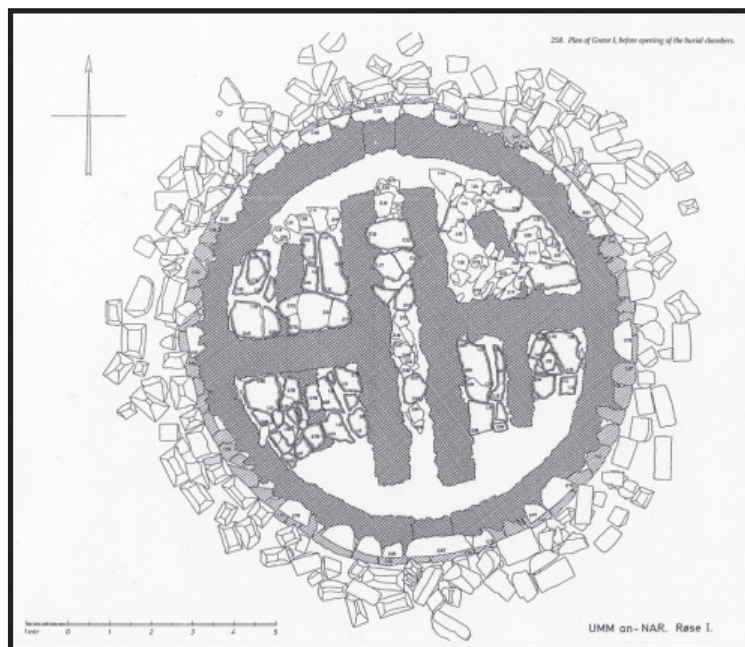


Figure 32: Ground plan of Tomb I (after Frifelt 1991).

The Umm an-Nar circular tombs often have two doorways leading to the interior chambers. Although entrances of this tomb were not preserved, their locations must have been at the two ends of the passage way. These entrances were usually found blocked by three stone slabs, two at the base and one above with a projecting handle by which it could be closed (*Figure 33*).

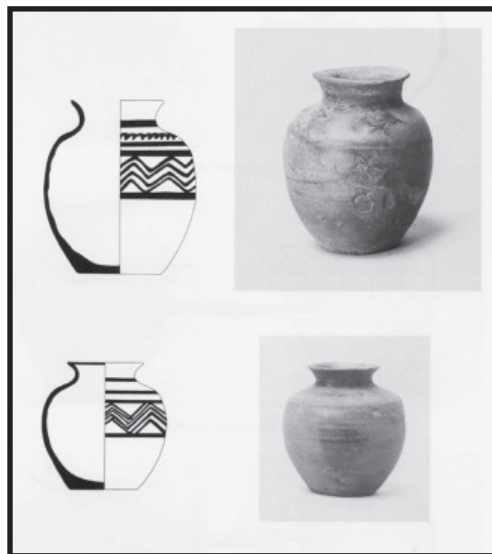
The Umm an-Nar collective tombs, especially the multi-chamber ones,



*Figure 33: Each trapezoidal entrance of the Umm an-Nar graves was blocked by stones like these. Two stones at the bottom and one with a handle on top.*

were successively used by simply removing the three entrance stones, placing the new burials and re-blocking the entrance. Piles of human bones associated mainly with pottery and some other finds were uncovered in the antechamber of Tomb I while only scantily scattered remains were found in the passage and the other compartments. This was interpreted by the excavators to mean that the earlier bones were swept away deliberately in order to place new burials. It had been recorded that at least 15 individuals had been buried in the western part of the tomb.

The finds retrieved from tomb I include 23 pottery vessels mostly made of fine red ware decorated with black designs (*Figure 34*).



*Figure 34: Pottery vessels of black-on-red ware (after Frielt 1991, p. 41)*

A few small canister jars made of fine grey ware, decorated with geometric faunal designs (usually goats) in black paint were also encountered (Figure 35).<sup>23</sup>

Unlike Hili tombs the stone vessels from Umm an-Nar are rare but an exotic vessel made of polished steatite

was discovered (Figure 36). Hundreds of short and tubular beads or ring-shaped ones made of dark grey stone (steatite) as well as carnelian beads have been found. Among the discoveries are one fragment of chlorite and one alabaster vessel. A few copper objects were also discovered.

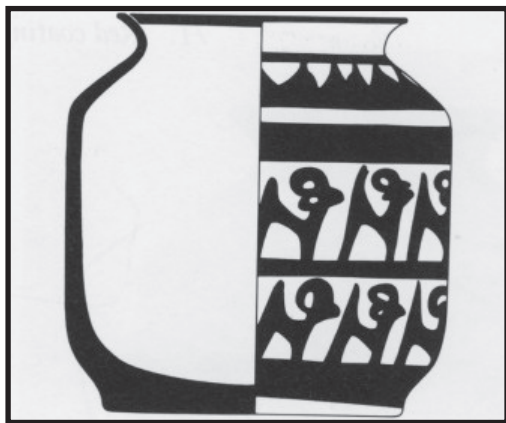


Figure 35: Small canister jar of black-on-grey ware decorated with geometrical designs sometimes with caprids or running goats (after Frifelt 1991, p. 46).



Figure 36: This vessel which may have been imported to the region is carved and polished in a black stone.

## Tomb II\*

This is a circular tomb, 12 metres in diameter resting on a plinth of flat stones (*Figure 37*). The ground plan is very much similar to tomb I, except that the passage is blocked in the middle leaving no access between the northern and the southern halves (*Figure 38*). Each half is divided into five chambers; a central corridor flanked by two chambers on each side. Only two thirds of the lower course of the ring wall and four sugar lump stones of the second one are left in situ. The thickness of the blocks used in the lower course reaches 0.65 m. The

four remaining stones of the second course are slightly smaller than those of the lower one. According to the excavators 310 stones of the ring wall were discovered. When the tomb was reconstructed by the Iraqis ten years after it had been exposed, these stones were put back on the ring wall forming four courses raising up to 1.85m above the plinth. The original height however was estimated by the excavators to about 2.5 m. I agree with this height as there are 118 blocks still lying around the tomb not used by the restorer. The upper course (the 4th)



*Figure 37: Tomb II after reconstruction.*

\* According to Thorvildsen's grave list this is recorded as Grave 43 and registered no. 1011

has 62 blocks therefore the remaining blocks would make two more courses bringing the total to six. As in the rest of the other tombs the interior walls are built of rough unshaped stones. The central part of the interior walls stood up to 2.25 m. In my opinion, the central part of the Umm an-

Nar circular tombs may have stood higher than the outer ring wall, i.e., the sugar lump stones acted as shells to give these structures an impressive appearance. From outside, the tombs may have looked like flattish domes covered with mud plaster, rainfall and the collapsed walls left no traces of

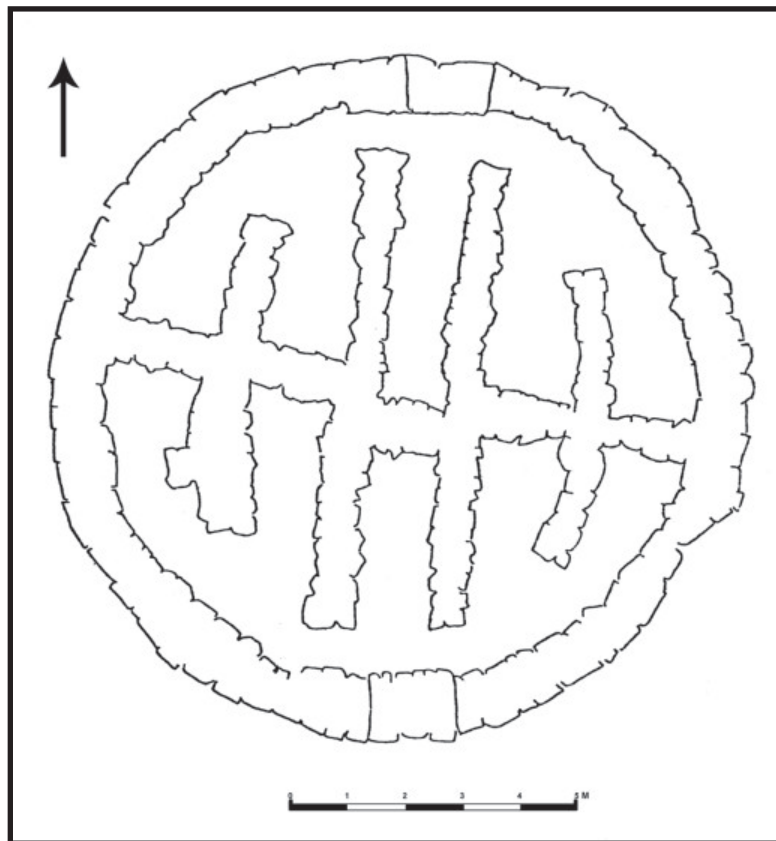


Figure 38: Ground plan of Tomb II (after Frifelt 1991).

the fragile plaster. Nevertheless, we should not completely disregard the possibility of having flat roofing in some of the small tombs. No remains of the two original entrances were left in situ but discovering two benches to the north and south of the passage are indicative of their locations.

Most interesting about this tomb is the discovery of four carved stones that were originally decorating the ring wall. They were found close to the location of the southern entrance. Although none of these stones was in situ it is believed that their original

places were on top and on both sides of the entrance. Carving was executed in a naturalistic raised relief representing an ox, an oryx, two camels (*Figures 39-41*) and a stylized idol like figure. Although the latter was discovered outside the ring wall as well, it is not easy to determine whether it was part of the wall or stood loose outside the tomb. Its shape is to a certain extent reminiscent of the well known south Arabian stele. Being cut in a vertical shape with a bottom wider than the top and two slanted edges such a stone may have not been fitted in the wall (see *Frifelt 1991, figure 24*). My impression,



Figure 39: Slab decorated with an ox. Photo by A Henderson

anyway, is that this stylized idol figure may have originally belonged to the settlement and was transported to the cemetery before or after deserting the island. A fifth stone is different as it has a U-shaped section decorated with a snake in prominent relief on each side (Figure 42). This may have been used as a gutter. Gutter stones are known at Hili and the Umm an-Nar tomb at Mleiha, in the interior of Sharjah. The above mentioned carved stones from the island are on display at the Al Ain National Museum, except the idol like figure which is still in Denmark.

In terms of the objects discovered inside the tomb, according to Frifelt, the finds were remarkably scarce in the northern chambers while the southern ones contained a great many bones and pottery. Although it has been suggested that old burials were swept away to make a place for the new ones, in addition to the falling of the upper shelves and breaking the pots, I should say that the majority of these tombs had witnessed a successive human destruction. It has been reported that at least 34 people were buried in this tomb. This is based of course on the skeletal remains discovered inside the tomb, which were mainly discovered in the southern half of the structure.



Figure 40: Carvings executed in relief: camel and oryx. Photo by A Henderson



Figure 41: Another slab carved with camel relief. Photo by A Henderson



Figure 42: Gutter stone (?) decorated with a snake relief. Photo by A Henderson

The scarcity of the human bones in the northern half is due to the plundering the tomb must have witnessed. Similar graves at Hili and elsewhere contained remains of hundreds of dead buried over a long period of time.

The total number of pottery vessels discovered in this tomb was put between 55 and 60. These include black-on-red, painted and incised grey, pear-shaped jars with pointed or small flat jars (see Frifelt 1991, figures 94-135).

Ornaments were dominated by more than 5400 beads mostly made of steatite and carnelian. According to the excavators some of these beads were worn as strings (*Figure 43*), but some, especially the micro beads may also have been used in embroidery.

Three blades described as daggers have also been discovered. One of them looks like a spearhead and the second one is close to a knife blade (*Frifelt 1991, figure 211*).



*Figure 43: These tabular beads are thought to have been used as embroidery on clothes. They may have been strung and worn at the back of the head as well.*

## Tomb V\*

This is a circular grave (*Figure 44*) with a diameter of 6.5 m. located on the edge of the eastern side of the plateau sitting on a thick plinth. The ring wall is built of small dressed stones, different from the stones used in the former tombs. They are much harder than the normal limestone used in the large tombs and they may have been originally quarried from the beach, as they contain small shells. There is another possibility that stones of this tomb and many of the other single chamber graves were quarried from the surface of the plateau itself. What makes the author suggest this possibility are the large cleared areas of the ground around the tombs themselves and other places of the plateau, which has flat rocks. The rocks exposed on the surface of the plateau are of the same type used in this grave

and in the single chamber graves. My impression is that these rocks were originally underwater when the level of the oceans was higher during the Eocene.

The plan of Tomb V (*Figure 45*) and the size of its dressed stones and the way they were cut are reminiscent of tomb H at Hili in Al Ain. It has four chambers made by one crossed wall running east west, dividing the tombs into two sections, and a short perpendicular wall stopping short before the ring wall, leaving an access to both sections. The outer wall was found, at one point, preserved to about 0.80 m. with five courses. The largest stones used are 0.65 x 0.25 m while the smallest used in the upper course range between 0.35 - 0.20 x 0.10 m.<sup>24</sup> It has been estimated by the excavators that



*Figure 44: Tomb V witnessed some restorations.*

\* According to Thorvildsen's grave list this is recorded as Grave 37 and registered no. 1089.

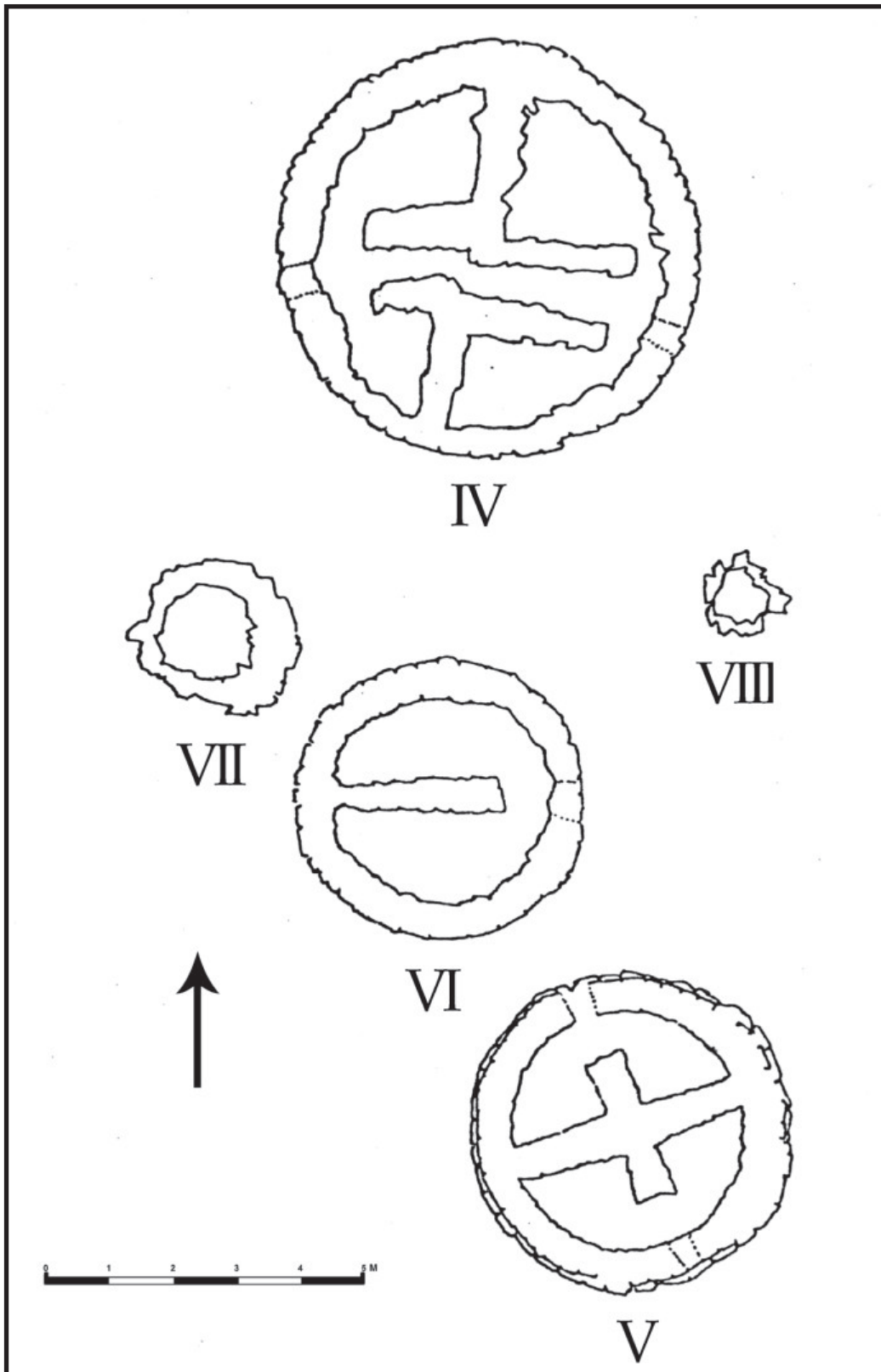


Figure 45: Ground plan of Tombs IV, V, VI, VII and VIII (after Frifelt 1991).

the tomb had been originally raised up to 1.40 m. This was calculated by the number of the dressed stones discovered, assuming that no original blocks had been removed. The tomb has been reconstructed using the original stones and stands up to 1.30 m above the plinth. If we add at least one more course to the existing height, as around 90 small original stones are still lying outside the tomb, I would say the outer wall consisted of 11 courses at least. The lower course has 47 stones while the most upper, which is smaller in diameter, comprises 67 smaller stones. Like tombs I and II the ring wall and the interior walls projected towards each other to form a roof.

The skeletal remains were found disturbed, nevertheless, it has been estimated that around 37 people were buried in this grave. They were provided with no less than 60 pottery vessels, three daggers and about 6000 beads made of black steatite, red stone and shell. The most interesting object

discovered in Tomb V is a large jar of fine red pottery decorated with a humped ox (*Figure 46*).<sup>25</sup> Of interest, as well, are the long beads which were originally fixed on clothing (see *Figure 43*). The well known tubular beads made of stone and perhaps other artificial material seem to have been used to embroider the garments. There is also evidence according to the Danish excavators that in combination with other small round or disc shaped beads the tubular beads were used to make necklaces.

It should be noted that remains of four skeletons were discovered just outside the western side of the ring wall. With them a number of potsherds and two stone querns were found. These seem to have been buried at a later stage when the tomb was full and there is no convincing evidence of being sacrificed as it has been suggested. It should be mentioned here that three of these skeletons were buried in contracted positions while the fourth one was buried stretched with the back against the ring wall and head to the north facing west. The way it was buried and its qibla facing (towards Mecca) well indicate a Muslim grave.



*Figure 46: Vessel made of fine pottery originally decorated with three oxen. This vessel may have been imported from the Indus Valley.*

## Tomb IX \*

This is the first tomb to have been excavated by the Iraqi team which started on the 23rd of February 1975 and ended the 20th of March same year (*Figures 47 and 48*). In the Iraqi internal report submitted to the department of Antiquities (dated 1st of April 1975) it is called the First Tomb. In order to have it in consistent with the other tombs excavated by the Danes, I gave this tomb, and the others excavated by the Iraqis Roman numbers. So, the first tomb dug by the Iraqis became IX, the second became X, the 3rd, 4th and 5th became XI, XII and XIII.

Before excavations, Tomb IX was a large heap of stones located between tombs II and V, with a diameter of 22 m. and 2.5 m. high. This was excavated in two stages and turned out to be a large round tomb. The outside was

excavated first followed by the interior chambers which were dug down to the bedrock. The ring wall, 1.35 m. in thickness and 12 m. in diameter is built of well shaped stones and rested on a plinth of flat stones (ca.15 cm. high) jutting out 0.20 m. from the bottom of the outside ring wall. The plinth, especially at its southern and eastern sections, comprises a large number of flat shaped stones which gives the impression that they were reused from older graves. Being not similar to the ashlar stones used in the adjacent tombs, it seems that they were especially cut to be used in the plinth of this tomb. What is puzzling however is that a number of these stones have also been randomly used in the core of the southern section of the wall, even at a height of 0.70 m above the plinth.



Figure 47: Tomb IX. Unrestored. Looking south. Stones of the exterior circle were discovered fallen outside the ring wall.

\* According to Thorvildsen's grave list this is recorded as Grave 42



Figure 48: Tomb IX looking north. Note the shelf in the chamber and the way the tomb was roofed.

The length of the dressed blocks used in the first course of this tomb range between 0.40 - 1.0 m with a height of 0.40 m. The second course has smaller stones. The length is 0.40 - 0.77 m and a height of 0.32 m. Smaller stones are also applied to the third course. At one point, the remaining wall consists of four courses with a height of 1.24 metre. Seventy five blocks are still in situ while the excavator uncovered 475 more and kept them in concentric circles around the tomb, in order to help the restorer put them back in their original positions as much as possible.

It should be noted here that I have noticed some dressed stones of this tomb as well as Tomb X bear traces of sharp tool work; a tool with perhaps one round end at one side and straight at the other (*Figure 49 and 50*). Chisels made of metals may have been used as well (*Figure 51*). This is partly contradicts with the idea of using hard stone tools in shaping the rocks used in the contemporaneous tombs at Hili, as it has been suggested by the French geologists. In my view, much harder stone tools may have been used only in shaping the blocks of the tombs built of hard rocks such as Tombs V on Umm an-Nar and H at Hili. Traces of pecking, probably done by a stone tool, are visible on the rocks of these two tombs. Nevertheless, we do not know the extent of the erosion on the exposed rock surface of the last two graves (V and H) and if it had obliterated the evidence.

An entrance leading to chambers 1, 2 and 3 was located in the northern section of the ring wall, though the area here is disturbed. Another entrance leading to the southern section must have been on the opposite side of the wall which is very badly disturbed. Two door stones each with a handle carved in the middle were found associated with both entrances. These, evidently, were used for blocking the doorways.

The interior of Tomb IX is divided by a cross wall running east-west into two separated sections (*Figure 52*). Each of these sections was divided into three chambers by two parallel walls

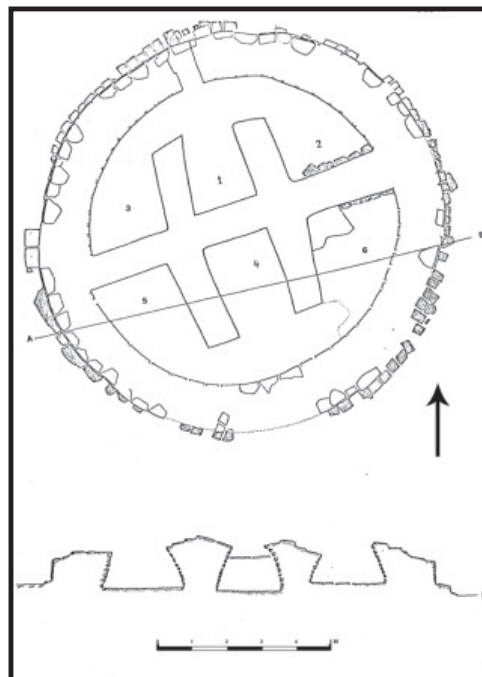


Figure 52: Ground plan of Tomb IX.



Figures 49 and 50: Marks of a sharp tool are clear on some stones from Tombs IX and X.



Figure 51: Metal Chisels like this one may have been used to shape the stones of the Umm an-Nar tombs (Iraqi excavations). Length 23.5 cm.

running north-south. The central part of the cross-wall stood to a maximum height of 2.50 metres. Unshaped, but relatively flat stones were used in the interior walls. These walls are not too wide at the bottom (0.80-1 m.), but they become wider the more they go upward forming a corbelled roof. The cross wall separating chambers 2 and 6 was built on a plinth of more than one course jutting from both sides.

Heaps of fragmented human bones were found inside the burial chambers. These bones were among pottery and bronze/copper objects and were in bad condition and did not allow any deductions to be made about the method of burial. They were mostly found in a dark brown layer of decomposed organic material like that of tomb II. According to the excavator, some bird bones were found inside the chambers. Bird bones are very common in the adjacent settlement but they have been reported from tomb I as well. Dr. Frifelt has interpreted their presence as a latter intrusion by nested birds.

In chamber 6 which is paved by flagstones, as well as in chamber 4, flat slabs jutting from the corners of the walls at a height of about 0.90m. from the floor were uncovered. Human bones were found on top of these slabs which look like shelves. These 'shelves' are good evidence for repeated burials, the first burials being placed on the floor and latter ones on the shelves.

Not many finds came from tomb IX. Only five pottery vessels of Black-on-Red ware, one fragment of grey pottery and another one of a large storage jar have been found. Three carved fragments of one steatite vessel from the type known as intercultural style were encountered (*Figure 53*). One complete alabaster pot was discovered V (*Figure 54*), in addition to a sling ball and three crushing or rubbing stones. The bronze/copper objects were rare as only one pin and a ring were unearthed. Four long pear-shaped shells with long tapering ends identified as *fiscus fiscus* Linnaeus were collected from the debris.



Figure 53: Fragment of an imported chlorite/steatite vessel.



Figure 54: Alabaster bowl from Tomb IX.

## Tomb X \*

This heap of stones which is located some 35 metres to the northeast of Tomb IX was also excavated by the Iraqi team and turned out to be a circular tomb with a diameter of 8.75 m (*Figure 55*). The ring wall is 1.00 - 1.15 m thick and is built of well shaped stones. The bottom wall of this tomb, which is well preserved, was built directly on a plinth of stones projecting 0.20 m. Unlike tomb IX the plinth here projects on both sides of the wall. When excavated, only six stones of the second course and two of the third one were found in situ. About 45 stones remained of the first course while 165 stones of

different sizes have been retrieved by the excavator and arranged in a circle around the tomb.

The interior of this tomb was divided by a cross-wall into halves and a doorway leading to each section was found. The northern half is divided into three burial chambers by two parallel walls which stop about one metre from the entrance, leaving two gaps between them and the ring wall. The southern half is divided into two chambers only, which is an unusual phenomenon in the large Umm an-Nar tombs (*Figure 56*).



Figure 55: Tomb X.

\* According to Thorvildsen's grave list this is recorded as Grave 44

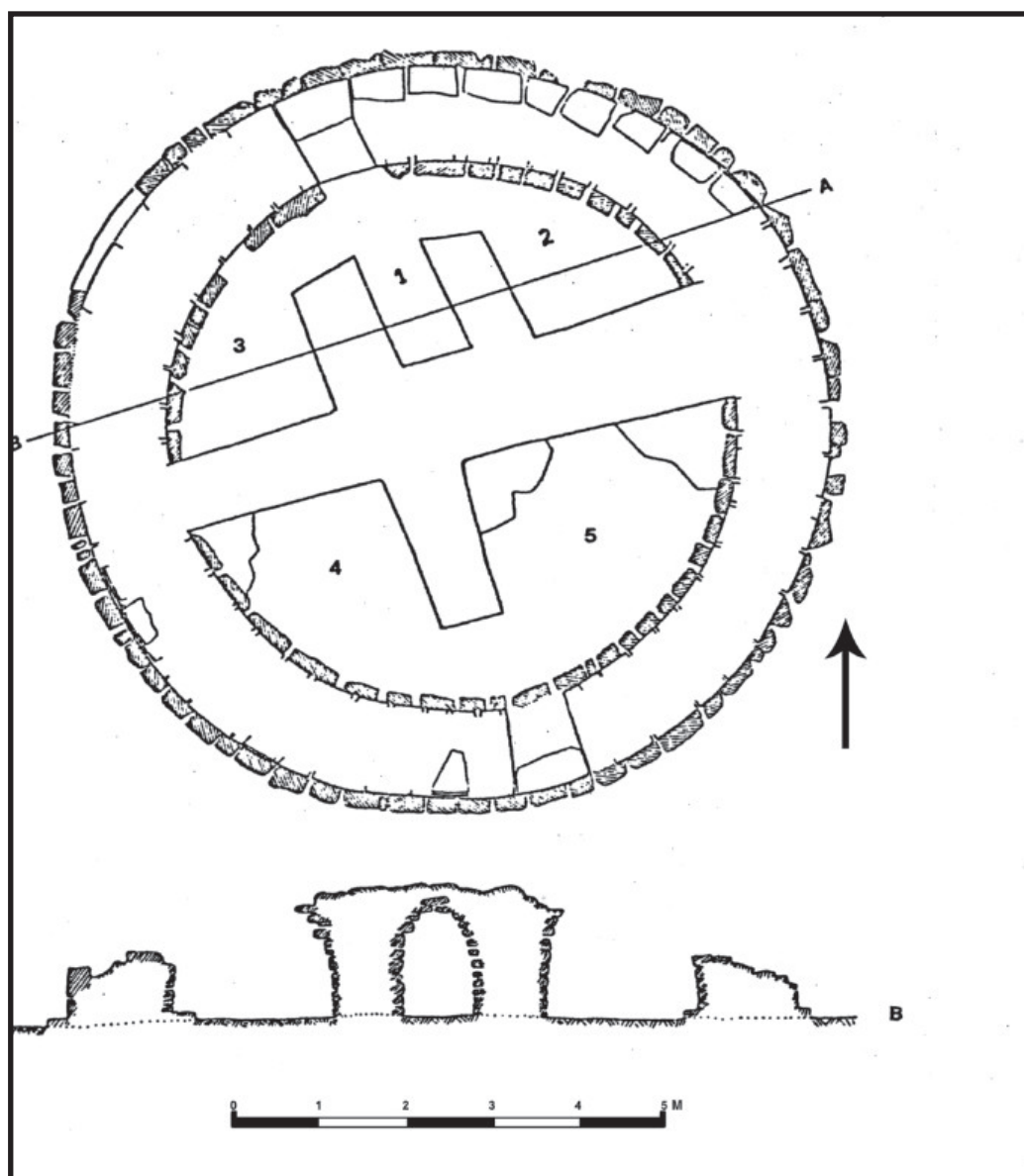


Figure 56: Ground plan of Tomb X. Drawing by W. Al Tikriti.

Whether the southern section of the eastern parallel wall was destroyed in antiquity and its remains, if any, went unnoticed by excavator is difficult to confirm. Because the tomb was originally corbelled, as evidenced by the section preserved, the span of the fifth chamber is much wider than the others, which would make corbelling here more difficult and requires making the roof higher than the other chambers, therefore, I believe that the tomb had originally six chambers rather than five.

Tomb X is the best preserved one among the other Umm an-Nar tombs

in the United Arab Emirates, as far as the roofing is concerned. The cross section which runs across the northern half of the tomb shows that the southern end of chamber 1 is still corbel-vaulted. Corbelling seems to be the only method used in roofing the Umm an-Nar tombs.

An upper layer of burials is evidenced in both chambers of the southern half of the tomb. Flat thin slabs were inserted into the corners of both chambers at a height of 0.90 m. and human bones were placed on top of them (Fig. 57)



*Figure 57: A number of shelves were discovered in Tombs IX and X. Skeletal remains were found on top of at least one of them.*

In terms of the discoveries, based on the objects catalogue, only four pottery vessels, one black-on-Red and three painted grey were retrieved (Figure 58). An alabaster bowl (Figure 59) and three bronze/copper spearheads ranging in length between 0.23 and 0.35 m were also discovered. Jewellery objects

found here comprise one golden hair band (Figure 60), large quantities of beads made of carnelian, black stone, white stone cylindrical and shell strung into necklaces. Four pendants made of bone and two made of stone were discovered as well.



Figure 58: Two canister jars of grey ware discovered during the Iraqi excavations at the cemetery. Ht. ca. 7 cm.



Figure 59: Alabaster bowl from Tomb X.



Figure 60: Golden hair pin from Tomb X. Length 10.5 cm (Photo by A Henderson).

# TYPE B TOMBS

## Tombs IV & VI

### Tomb IV \*

This is another round tomb but smaller than I, II, IX and X (8.5 m. in diameter) and built of unshaped stones. Three to four courses of the ring wall were left. It has a central passage like that of tomb I and two cross-walls preserved up to 1.15 m (*Figures 61 and 45*). The two curved walls which are represented in tombs I and II are absent here due to the lack of space in this much smaller tomb. In other words, the larger the tomb is, the more interior walls it needs in order to support the roof. No paving was found. Traces of one entrance were found at each end of the passage (east-west). The ring wall has been restored to a height of 0.60-0.70 m using flat stones.

Most interesting in this tomb, in my view, is the discovery of one dressed stone found re-used in one of the interior walls. This stone is different from those used in Tomb V and must have been taken from one of

the large tombs (I, II, IX or X), which indicates that Tomb IV cannot be considered as a transformation from the single chamber tombs to the more elaborated ones, as one might think. In her description of the tomb Dr. Frifelt does mention however that 'a small number of smoothed blocks had been used casually and probably secondarily in the walls among the uncut stones' (Frifelt 1991: p. 32). I interpret the three different types as being social rather than chronological (Chronology of tombs will be discussed in more details below).

According to Frifelt, finds discovered in Tomb IV are very scarce. Two large jars, one globular body of a Black-on-Red pottery and another of Red-brown ware have been found together with a few potsherds. Bones were scarce. It has been recorded that a stone bearing an engraving of a gazelle or an oryx was discovered in the corner of one of the chambers by the ring wall (Frifelt 1991, figure 44).

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\* According to Thorvildsen's list this is recorded as Grave 41 and registered no. 1088. Note that III is not a grave but a number given to a trial trench opened by the Danish Expedition. The location of this trench has not been well defined.



Figure 61: Tomb IV - Type B burial.

## Tomb VI \*

With a diameter of 5.5m this tomb was constructed of rough unshaped stones just next to Tomb V, at a distance of 1.60 m. The tomb is divided into two chambers by a cross-wall running east-west. These two chambers are connected to each other by a passage between the ring wall and the eastern end of the cross-wall (*Figures 62 and 45*). In this ring wall directly opposite the passage an 0.80 m. wide entrance was found. The best preserved section of the ring wall stood up to 0.75 m. while the cross wall is preserved to a height of 1.30 m. Most parts of the chamber floors are covered with flagstones. Above these floors, as usual, heaped skeletal remains were uncovered. The total number of the buried individuals

was put at five. Another two skeletons were also found placed just outside the tomb to the south. It should be noted here that, before its disturbance, a tomb like this may have contained 2-3 dozens people.

Remains of 15 pottery vessels, half of them of Black-on-Red have been registered from this tomb. Among the few potsherd collected there were two fragments of folded rims which must have been imported from Mesopotamia. An incomplete blade of a bronze/copper dagger or a knife and around 100 beads have been discovered. A quern stone and a hammer were found just to the east of the ring wall.

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\* According to Thorvildsen's list this is recorded as Grave 38 and registered no. 1090.



Figure 62: Tomb VI - Type B burial.

## TYPE C TOMBS

### Tombs VII, VIII, XI, XII & XIII

#### Tomb VII\*

This is a single chamber tomb located at a distance of only one metre northwest of the former tomb (*Figures 63 and 45*). Total diameter is about 3m while the chamber itself is about 1.60 m. The Danish excavators do not mention an entrance to the tomb but I noticed that there is an indication of a blocked gap in the southern section of the wall, more or less, facing Tomb VI, which may well have been the entrance to the burial. The tomb stands at 0.50 - 0.60 m above the ground and has 4 - 5 courses. It was built of rough stones but according to Frifelt one dressed block, reminiscent of those used in the ring wall of tomb V, was used in the southern part of the wall. The presence of this block stone is other evidence that this single chamber tomb is more recent than the adjacent sophisticated tomb (tomb V). This, would again support my above-mentioned view that the single chamber tombs of the island

of Umm an-Nar do not represent transformation from Hafit type graves to Umm an-Nar tombs, as it has been suggested by B. Vogt.

Only remains of 3 - 4 bodies were found in no discernible order on an unpaved floor, together with four pottery vessels, mostly broken. A large complete jar (0.51 m. high), the largest ever discovered in the excavated graves of Umm an-Nar, described by Frifelt as having a pear-shaped body with a small convex base and a band-rim on a short rim was found inside the grave (see Frifelt 1991, figure 207). This jar looks to me of Mesopotamian origin and based on its rim, I would envisage that some of the rimsherds, discovered in the adjacent settlement and in some of the tombs, must have belonged to the same category. Outside the tomb on the south and against the ring wall there were remains of one or two individuals (Frifelt 1991, p. 39).

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\* According to Thorvildsen's list this is recorded as Grave 39 and registered no. 1091.



Figure 63: Tomb VII a single chambered burial of Type C. Tombs VI and V are shown in the picture

## Tomb VIII \*

This is located at about four metres northeast of tomb VI. It is a very small round tomb of rough stones with a total diameter of 1.50 m. It has an irregular single chamber preserved to 3-4 courses from one side and

flattened out from another. The size of the tomb indicates that it may have been built to be a child's grave (*Figures 64 an 45*). Apart from one single potsherd no objects were found.



Figure 64: Tomb VIII.

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\* According to Thorvildsen's list this is recorded as Grave 40 and registered no. 1092.

## Tomb XI \*

This tomb is a small circular/oval single burial chamber located at a distance of 110 m. southwest of tomb IX (Figure 65). It is one among eight small cairns concentrated in a small area. The ring wall was built of unshaped stones and only the lower courses are preserved, according to the Iraqi excavators and no traces of a doorway have been discovered. Some skeletal remains in a bad condition were found inside

the chamber. Despite the disturbance the tomb witnessed, some objects were discovered. These comprise one complete jar of red ware decorated with four goats (Figure 66), three complete pottery vessels of different shapes, and one alabaster pot. Two bronze/copper dagger blades (0.41 and 0.11 m. long) and a large collection of beads made of carnelian and shell were found.



Figure 65: Tomb XI - Type C burial.



Figure 66: Pottery vessel of black-on-red from Tomb XI decorated with four goats.

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\* This tomb is numbered 17 in Thorvildsen's catalogue

## Tomb XII \*

Tomb XII is similar to tomb XI but a little smaller. Its chamber is 2.0 m long and 1.60 m wide, built of rough stones (*Figure 67*). Again, only the lower portion of the of the wall is preserved and no entrance was reported by the excavator. A closer examination by the author led to the conclusion that the three single chamber tombs excavated by the Iraqis have blocked entrances facing south, which make recognizing them difficult.



Figure 67: Tomb XII - Type C.

The finds, however, consist of some bronze/copper objects such as pins, a complete dagger blade (0.32 m. long), a complete spearhead blade (0.43 m. long) and a fragment of a similar spearhead (*Figure 68*). Among the finds also were three pendants and a large group of beads made of stone and shell. Pottery was very rare and represented by one complete vessel of Black-on-Red Ware.



Figure 68: Daggers and spearhead from Tomb XII and others.

\* This tomb is numbered 22 in Thorvildsen's catalogue

## Tomb XIII \*

A small single chamber tomb with a total diameter of 3.50 x 3.20 m (*Figure 69*). The chamber is 2.0 m from east to west and around 1.70 m from north to south. There is an indication of a blocked entrance in the southern

section of the wall. Height of the remaining wall range from 0.40 to 0.70 cm above the ground. According to the excavator the tomb was found empty. No skeletal remains or objects have been reported.



Figure 69: Tomb XIII - Type C.

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\* Called 27 in Thorvildsen's catalogue

## SINGLE OR MULTI-PERIOD BURIALS?

Because of the various types of architecture used in the tombs of the Umm an-Nar island, Dr. B. Vogt in his Ph.D thesis attributed the difference in these tombs to a chronological factor.<sup>27</sup> The elaborated tombs (Type A) according to Vogt, was a result of gradual development from the single chamber to multi-chamber tombs. This interpretation, which sounds logical before discussing the other elements, was quoted by Dr. D. Potts in his well known book on the archaeology of the Arabian Gulf (Potts: *The Arabian Gulf in Antiquity* 1990) but lacks, in my opinion, convincing evidence. While I agree that the Hafit single burial cairns were developed into well elaborated tombs during the Umm an-Nar Period, it should be noted that the Umm an-Nar single chamber graves of Type C are different from those of Hafit. The latter are the earliest above-ground tombs known in the interior of Abu Dhabi. Being on an isolated island the Umm an-Nar sites seem to have been well preserved and did not suffer much from stone plundering. Plundering aimed mainly at looking for the precious objects

and not for the purpose of reusing the stones. Therefore, calculating the number of stones left in situ, as well as the present condition of the graves themselves, indicates that they were shallower graves and different from the beehive ones at Jebel Hafit and elsewhere.

Hafit type graves with multi circular walls are more elaborated than the Umm an-Nar single chamber graves. The other factor which stands against Vogt's interpretation is the discovered objects. None of these graves yielded pottery from the Jemdet Nasr Period like the ones known at Hafit. I admit that Hafit graves do not always yield such types of pottery but they are usually provided with different type of beads, two of which are very distinctive and well known.

One type consists of small globular beads made of frit (kind of baked paste) in light green (originally of darker colour) attributed to Mesopotamia while the other one is flat lozenge beads. The latter is made of stone or shell (?) perforated to narrow ends

of two opposite corners. Neither of these types of beads have been discovered in the five single chamber tombs excavated on the island so far. All the materials discovered in the above-mentioned tombs are from the Umm an-Nar Period and there is still no evidence of complete clearing and reusing these graves. If they had been cleared away to be reused we would have expected to find some skeletal remains or small finds of Hafit Period outside the chambers. No objects like these have been discovered during the excavations of the single-chambered graves so far.

The other reason which does not convince me with the idea of considering Type A tombs as gradual development from Type C through Type B taking place on the island is the reuse at Tomb IV (Type B) of 'a small number of smoothed blocks .. used casually and probably secondarily in the walls among the uncut stones' (Frifelt 1991: 32). As mentioned earlier, a sugar lump stone similar to those used in the elaborated tombs of Type A is still tucked in one of the

interior walls of the same tomb (IV), indicating a younger date than the other elaborated tombs. Moreover, Dr. Frifelt mentions that one dressed stone reminiscent of those used in the ringwall of Grave V (Type A), was reused in the southern wall of Grave VII, a single chamber burial (ibid: 36). If not mistaken (I could not find this stone in 2009) this would also be evidence against the idea of transformation from simple to more complicated graves taking place on the island.

According to the available evidence and the similarities in the objects discovered in the three different type of graves, the Umm an-Nar cemetery should be considered as one unit, belonging to a single period. If tangible evidence, like the discovery of Hafit type pottery in the single chamber Umm an-Nar graves, is identified, which seems unlikely, this view may need to be amended. The architectural differences among the graves, in my view, are more likely to reflect social than chronological factors.

## BURIAL CUSTOMS

The twelve excavated tombs at Umm an-Nar with relatively well preserved bones, which represent about 24% of the total number, showed no specific rules regarding the orientation of the body. Since the skeletons were badly disturbed, no absolute conclusion about the burial system can be drawn. Nevertheless, the discovery of these bones in heaps indicates, as has already been mentioned, that the bones may have been swept aside in order to place new bodies. The best preserved skeletons came from outside the tombs. Preservation might be considered due to the little disturbance that took place outside the tombs, contrary to the interior of the chambers. The presence of these skeletons outside the chambers was interpreted as possible human sacrifice (Thorvildsen 1962: 218), although there is no convincing evidence for such interpretation. These “extra-mural” burials, as they are called by During Caspers, are considered to be the same cultural assemblage as the main tombs and of the same date (During Caspers, 1970: 215). This is based on the resemblance of the pottery from the two areas. These burials were provided with quernstones. Quernstones were also found, but fewer of them, inside tombs I and II. The presence of the querns alongside the skeletons, was interpreted as showing that the people who were sacrificed (?) were females, as such kitchen objects are always associated with women (ibid: 216). We feel that the evidence for human sacrifice is tenuous and we think that the presence of these ‘extra-mural’

tombs might represent a very late stage in the funeral system of Umm an-Nar despite the resemblance of the pottery of the two areas. The pottery shows very little stylistic change throughout the whole assemblage of Umm an-Nar which lasted not more than 300 years (2600 - 2600).

It should be mentioned here that the best and most recent study carried out on similar bones came from the interior of Abu Dhabi. From Hili in Al Ain a large collection of bones came from DLA, a tomb located inside the children’s City at Hili North and from Tomb N inside Hili Archaeological Park. From the former at least 21 skeletons buried in contracted positions were carefully excavated from the chamber (*Figure 70*). Heads were buried by the walls and the rest of the bodies found extended inside. There was no specific orientation. The dead were provided with objects such as pottery and stone vessels, in addition to jewellery such as necklaces made of carnelians and other materials, finger and toe rings made of bronze and razors.

Tomb N yielded remains of more than 600 people buried in a mass grave over at least 100 years in a subterranean pit, just outside one of the above-ground standard tombs from the Umm an-Nar Period. This huge bone collection, which belongs to the very end of the Umm an-Nar Period (2200-2100 B.C.), was studied by Dr. Kath McSweeney, an osteologist from the University of Edinburgh.<sup>28</sup>



Figure 70: Burial system at Tomb A, Hili North (After B. Vogt, 1985)

## ABANDONED & NOT RE-INHABITED

It should be noted that the Island of Umm an-Nar was abandoned, in my opinion, around 2300 BC; i.e. before the reign of Naramsin, grandson of Sargon, the founder of the Akkadian Empire, and Manushtusu, son of Naramsin, and was never inhabited again. The surface of the plateau, where the cemetery is located, is almost completely void of pottery. The scarce potsherds which we sometimes come across are contemporary to the adjacent settlement. There is no evidence of a second or first millennium presence on the island, such as the Late Umm an-Nar site at Tell Abraq and the interior sites at Hili 8. The island is also void of pre-Islamic and Islamic pottery. Unlike

several locations along the coast, the island was not inhabited during the Late Islamic Period, perhaps because of its small size and the ancient ruins which are usually considered by the bedouins, as a bad omen to live beside. The stone idols reported on the island must have discouraged people from living on it. We should also mention that, when the sea level was higher in the 3rd millennium BC the environment must have been different and navigation around the island was easier. Nevertheless, the island must have been visited by the local tribes and fishermen who used to move along the coast for the last three centuries at least.

## WATER & THE WATER CISTERN

No source of water has been discovered on the island but we assume that the inhabitants of Umm an-Nar must have relied on utilizing the underground water. No well has yet been discovered which I think must have existed. Rain water may have been utilized as well. On the southwest side of the plateau and right below the edge of it, high ground water was discovered, but unfortunately it is too brackish to consider suitable for drinking. There are two main depressions on the plateau which might have been used as pools for collecting rain water. One is located south of Tomb XII (see contour map) and the other is in the northern side where an eighty year old cistern has been built. The former has not been examined and the writer thinks that it might conceal an ancient well but this remains conjecture. The only relatively modern structure on the island is a water cistern built to collect rainwater to be used by the inhabitants of the island of Abu Dhabi (Figure 71). This cistern is located on the northern part of the plateau and well built of local stones and *juss* mixed with cement and beach sand. The walls and the floor are plastered with cement. It is 11.10 m long, 6.10 m wide (inside measurements) and 2.90 m deep and has four inlets range in width between

0.70 m and 0.80 m. The thickness of the walls from the top is 0.60 m. The cistern is wider at the top than the bottom as the walls were built in three tiers each is set a few centimetres back than the one below, in order to gain strong walls. Measurements at the bottom are 10.60 m by 5.10 m. According to the date depicted above the inlet level on the interior side of the southern corner of the western wall the cistern was built in 1349 Hijra, equivalent to 1930 AD (Figure 72). The inscriptions mention the name of Hareb Otaiba, perhaps the owner, and Al-ustaz Ali bin ...Baluchi, the builder. The missing father's name is difficult to read. On the upper part of the eastern wall there is another inscription which reads *Bismallah al-Rahman al-Rahim* (in the name of God the compassionate the merciful) (Figure 73).



Figure 71: Eighty years old water cistern built by the inhabitants of Abu Dhabi to collect rain water.

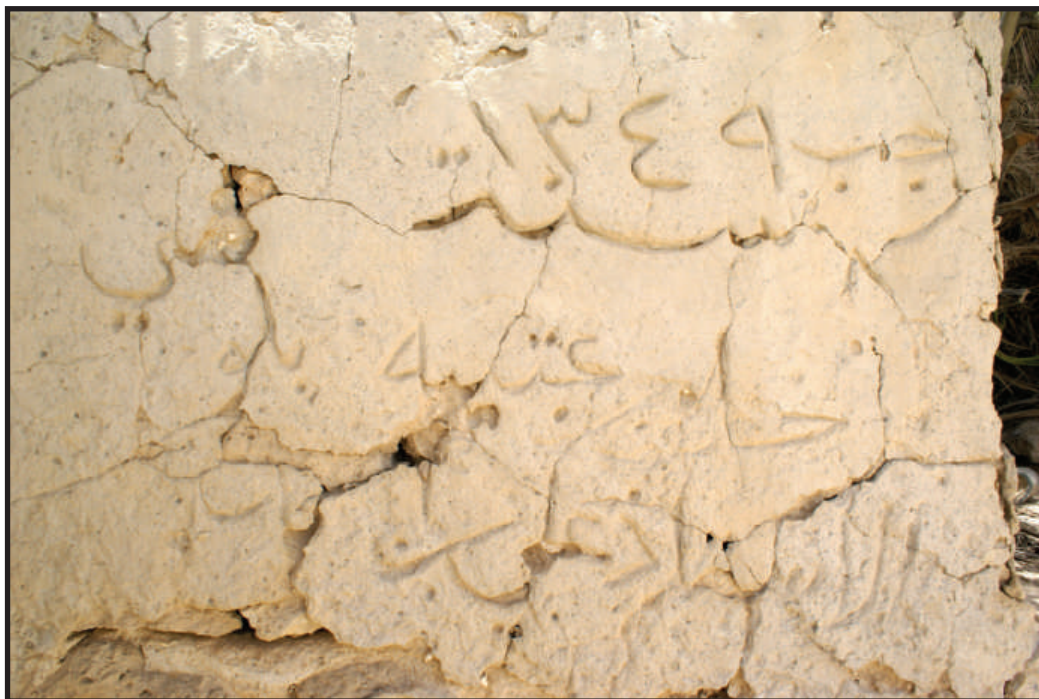


Figure 72: Arabic inscriptions documenting the names of the owner and the builder of the cistem.



Figure 73: Bismallah al-Rahman al-Rahim (in the name of God the compassionate the merciful).

## THE RESTORATIONS

The first involvement of the Iraqi archaeological expedition in Abu Dhabi took place in 1970. Parallel to the surveying team headed by late Mohamed Ali Mustafa, which identified 72 sites in different places around the United Arab Emirates, was another team carrying out a restoration programme on the Umm an-Nar large tombs.<sup>29</sup> Tombs I and II which were in a bad state of preservation, in addition to Tomb V were reconstructed by reusing the same original stones.

Unlike the Grand tomb at Hili, no new stones were used<sup>30</sup>. Tomb V was in a relatively good condition and most of its stones which are smaller than those used in the former tombs, but harder, have been put back on the ringwall. Today the tomb stands 1.30 m above the plinth. Recently, and just before the foundation of Abu Dhabi Authority for Culture and Heritage, a team from the former department

of Antiquities and Tourism had to mitigate the disturbance that happened to the interior walls of Tombs I and II. Stones were put back on these walls without using mortar which was the way the Iraqis reconstructed them.

Further restorations were carried out at the settlement for the first time by the same department under the supervision of the author<sup>31</sup>. These included putting back some of the fallen stones on the walls of the House Complex, as well as the Warehouse and stabilizing them. The rest of the stones which were discovered during the excavations at Mound A, were rescued from the excavation dumps. The result was making a large pile of rocks and some smaller ones which can be used once a different reconstruction plan is adopted in the future.

## DISTRIBUTION OF THE CULTURE

The aim of this section is not to discuss the entity of the Umm an-Nar, its economy, trade and interaction with other civilizations but to briefly explore the present known evidence of the culture in the United Arab Emirates with little reference to neighboring countries.

Since the discovery of the archaeological sites on Umm an-Nar island many other contemporary sites have been identified in the U.A.E. (Figure 74). The Bronze Age complex at Hili with its Grand Tomb sitting in the middle of the archaeological park is a very significant site and is the first to have been excavated in its interior<sup>32</sup>. This complex consists of six settlement sites (Hili 1, Hili 8 and Hili 10 are excavated while H 3, H 4 and H 11 are either partly sounded or not). Included in the complex lay thirteen above-ground circular tombs of Type A with exterior walls built of sugar lump stones.

Unlike Umm an-Nar, graves of Types B and C are not known among the Hili, Bronze Age Complex, but they might be represented in the large group of graves which litter Jebel Huglah, the first mountain ridge to the east of the complex.<sup>33</sup> It seems however that the interior of southeast Arabia, rather than the coastal areas was the homeland of the Umm an-Nar culture. It was spread out to the coasts due to the interaction with Mesopotamia, the Indus Valley and Balochistan. The sea,

however, has always been considered a major source for the economy of the region, therefore, we should not ignore this reason for such expansion too.

Since the writer's first discovery of an Umm an-Nar site outside the Umm an-Nar island at Ghanada in 1982, several have been discovered in different regions.<sup>34</sup> Among these, there are two major coastal sites both discovered in the Northern Emirates. These are Tell Abraq in Umm al Quwain (Potts 1990, 1991, 2000 )<sup>35</sup> and Kalba 4 in Sharjah on the East Coast.<sup>36</sup>

The two former sites fall in the category of fortified settlements; so Site 2 at Bidya the coastal site which is located in Fujairah north of Khorfakkan (Al Tikriti 1989).<sup>37</sup> Apart from the seasonal settlement at Ghanada and the above-mentioned major sites, a number of sites have been discovered along the southern shore of the Arabian Gulf, evidence for the expansion of the culture further west along the coast of Abu Dhabi.

Jebel Dhanna and Ras Al Aysh came soon after the discovery of Ghanada.<sup>38</sup> The settlement at Al Safouh was as dense as Ghanada, or even more,<sup>39</sup> while the other two (Mowaihat in Ajman and Ed-Dur South) were very shallow. The former (Mowaihat) showed a small collection of fine red pottery and some coarser Umm an-Nar fabrics together with some hearths.<sup>40</sup>

According to Carl Phillips, the latter yielded similar pottery and was described as a shell-midden (for the nature of these two ephemeral settlements and further notes on the different types of Umm an-Nar settlements see former footnote). The same site (Ed-Dur South) has been relocated during a survey season carried out by a local team organized by the Ministry of Culture, Youth and Community Development in May 2009.

Prior to the discovery of the Ajman settlement at Mowaihat by the writer,

an ashlar masonry built tomb and an adjacent subterranean burial similar to Tomb N at Hili were also identified and excavated in the same area.<sup>41</sup> This first typical Umm an-Nar tomb discovered in the northern emirates was soon followed by a number of other tombs including Munaie (excavated by Carl Phillips), Shimal in Ras Al Khaima,<sup>42</sup> and at Hatta.<sup>43</sup> Al Safouh in Dubai,<sup>44</sup> Jebel Emalah,<sup>45</sup> Tell Abraq<sup>46</sup> and Mleiha in Sharjah.<sup>47</sup> Other Umm an-Nar tombs of Type B are also known at Asima,<sup>48</sup> Jebel Faya, Jebel Buhais and Kalba.

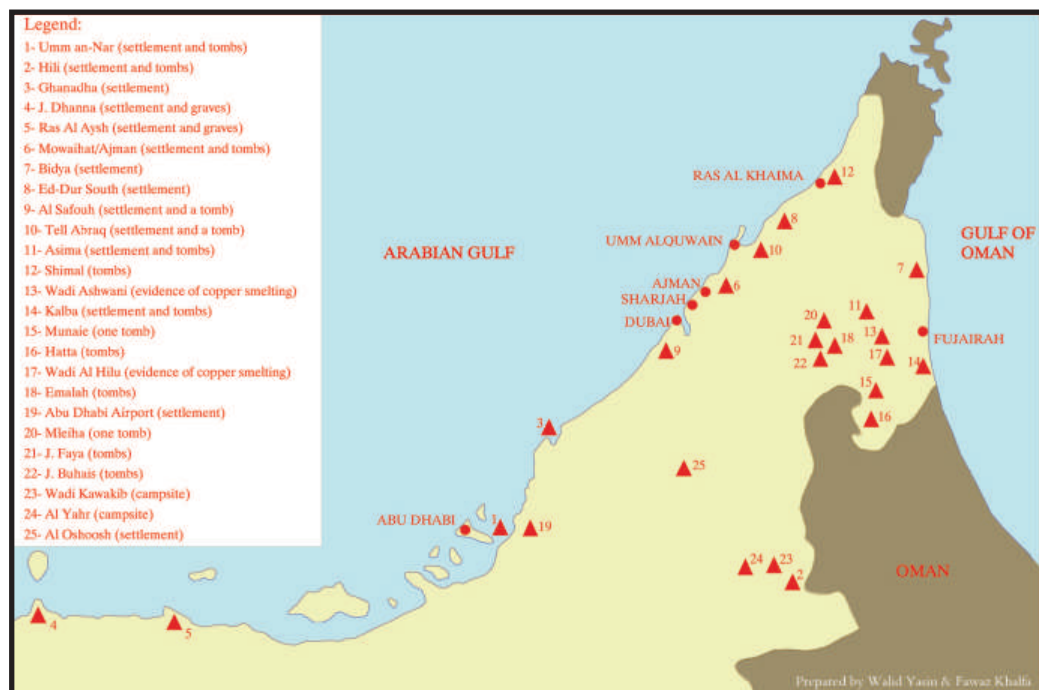


Figure 74: Distribution of the Umm an-Nar sites in the United Arab Emirates.

The closest settlement site to the Umm an-Nar island known so far is the one discovered in 1995 by Peter Hellyer.<sup>49</sup> The site is located within the periphery of Abu Dhabi Airport overlooking the nearby sabkha which extends to Umm an-Nar, some 12 km away. Artefacts from the Neolithic Ages, as well as pottery from Pre-Islamic and the late Islamic Period have been also found on the surface. Most important is the large collection of pottery belonging to the Umm an-Nar period.

This collection is also mixed with a few potsherds which might belong to the Hafit Period.<sup>50</sup> One well and a possible second were discovered at the site. They were only partially excavated, therefore it is impossible to relate them to one of the periods represented at this thin site. Digging them all the way down to the bottom might yield some evidence on the period they belong to.

The Abu Dhabi Airport site is of particular interest because of its proximity to the offshore island of Umm an-Nar.<sup>51</sup> The Umm an-Nar settlements are not confined to the coasts and the oases as there are other sites located in the wadis of the Al Hajar Mountains serving as post links between the east coast and the interior. Of these are Wadi Ashwani

and Wadi Al Hilo. Sites of these two areas seem to have been involved in copper production.

Today, there is new evidence that the Umm an-Nar people were not only settled communities involved in the copper industry, farming and fishing but also they were semi-nomadic. Evidence of this came from the remains of a 3rd millennium occupation and a fire place with a handful of Umm an-Nar pottery, mostly of the type designated by S. Mery as Hili Sandy Ware, discovered between the sand dunes at al Yahr, near the road to Abu Dhabi. This campsite, if I may say so, was identified by the writer during a visit arranged by Mr. Peter Rothfels to show us a Neolithic site in the region.

Another campsite from the Umm an-Nar period with surface occupation has also been noticed by the writer at Wadi Kawakib, west of Bida bint Saud. The site was identified while examining surface remains from the Iron Age with concentration on Iron Age pottery by a local team from the former department of antiquities. Both sites (the Iron Age and the Umm an-Nar one) are desert sites but unfortunately they have been incorporated into a private farm. One of the most interesting desert sites<sup>52</sup> is the one discovered at Al Oshoosh in

2001 by H.H Sheikh Mohamed bin Rashid Al Maktoom, Ruler of Dubai. The site is located midway between Al Hajar Mountains and the sea, a few kilometres north of the border with Al Ain. It was shown to me by Dr. Husain Qandil, the resident archaeologist in Dubai and for the safety of the site, coordinates are not given here.<sup>53</sup> Based on the surface collection the site seems to have been first occupied during the Neolithic and reused during the Umm an-Nar Period. Not many of the 3rd mill. BC pottery types were represented but potsherds belonging to the category known as 'Hili Sandy Ware' are available.

Despite what seems to be Neolithic, we do not know if the technique of certain types of stone artefacts continued in use during the 3rd mill. BC, especially at the desert sites. Due to the importance of the site as being an extensive surface settlement compared to the other seasonal sites it is worth mentioning some of the observation notes I made during my various visits to the site during the last six years. The site is a mound of 30 metres in diameter raising about 2-3 feet above the surrounding with a shallow separate extension at a distance of about 20 metres at the southwest. At this lower spot there are some potsherds and traces of ashes

indicating fireplaces. The height of the mound from the east is thicker than the west as it overlooks an ancient depression or dry lake.

The settlement may have been originally on the edge of a *ghadir* (seasonal lake). In a recent visit (2008) with one of my colleagues we discovered that the Dubai department of antiquities had opened two small trenches on the main mound. The eroded sections of these trenches indicate that the site was densely occupied and the archaeological layer (at least 15 cm thick) overlay a greyish layer of sand mixed with ash. Fragmented bones of terrestrial animals (sheep and goats seem predominant) are scattered all over the main site and were still visible in the eroded sections.

Shells are very scant on the surface and I imagine the case was still the same during excavation. My impression is that the inhabitants of Al Oshoosh were much involved in animal husbandry than farming. The site must have been an important post link between the sea and the Al Hajar Mountains, and according to the topography of the region it must have maintained good grazing fields.

## CATALOGUE OF THE UMM AN-NAR GRAVES

Prepared by Dr. Walid Yasin Al Tikriti

### Declaration

*This catalogue is an updated copy of the one originally prepared by Knud Thorvildsen and published by Dr. Karen Frifelt. Since its preparation in 1962 five more tombs have been excavated and five more have been bulldozed. The present copy witnessed major updating in some graves while, more or less, I kept the same original description of the rest.*

### Introduction to the catalogue

The aim of this catalogue is to document the current state of the archaeological sites of the Umm an Nar Island and its components, five decades after its documentation by Thorvildsen. In order to comply with the Danish catalogue and not further complicate the matter, I have followed the original numbering of graves. Despite the fact that Thorvildsen has done a great job in documenting the graves I think that re-describing the graves whenever it is possible, especially the ones excavated after preparing his catalogue, might be more useful. What makes me update the original catalogue is also the discovery of three more tombs which Thorvildsen did not notice. The reader might find some differences in the measurement of the tombs, which I did my best to be as much as possible closer to reality, taking in consideration finding the right edges of the non-excavated graves. The outline of the map used

here (Figure 75) was prepared by myself using a plain table. I plotted the graves as accurately as possible when I was carrying out limited excavations at the ruins of the Umm an-Nar village in 1979. I should not forget to mention that I am indebted to the Iraqi Consult and its then manager Faysal Rahmatallah for providing me with two of his surveyors who have read and drawn the contour lines shown in the same figure.

It should be noted that Graves 1-4 plotted by Thorvildsen were bulldozed in 1974 and replaced by the existing oil refinery which occupies the southern plateau. Grave 49 was located outside the northern plateau and it has also been bulldozed. The latter was the only grave among the last five missing graves which showed evidence of having sugar lump stones. Grave 1 was located according to Thorvildsen on the highest point of the island, today occupied by the oil refinery.

In order not to miss the bulldozed graves I have copied Thorvildsen's description of these graves and added my comments whenever possible.

The recent documentation of the Umm an-Nar tombs which I intermittently carried out in 2008 and 2009 involved marking each tomb number on a small metal plate.

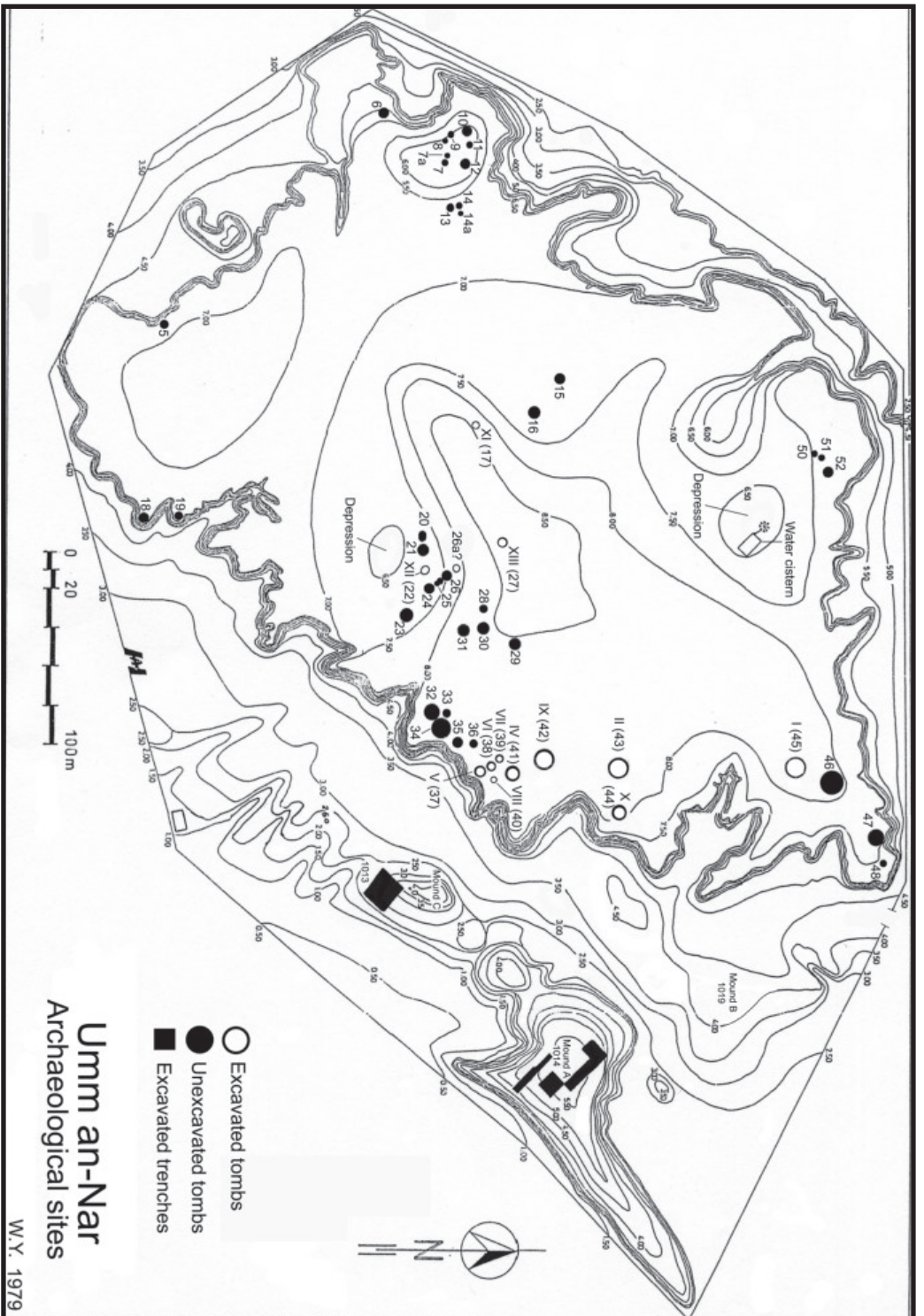


Figure 75: Topographical map of the archaeological area. Umm an-Nar Island.

**Grave 1** (no longer exists): Mound 2.50 - 3.00 diameter and 0.25 m. high. Ring wall visible, ca 1.75 m diam. outside measure. Located on the highest point of the island. According to the size it must have been a single chamber grave and gives the impression that it was similar to Grave 40 (VIII) excavated by the Danish team but slightly larger.

**Grave 2** (no longer exists): Mound 4 - 5 m diam. and ca 1.50 m high. Ring wall ca 3 m diam. outside measure, with 3 stone courses preserved on the north side. In the centre there is a sand-filled depression (Thorvildsen 1991). Judging by the size given, the grave should have been a single chamber, with an interior diameter not exceeding 1.50 m.

**Grave 3** (no longer exists): Mound 5 - 6 diam. and ca 0.50 m high. Ring wall just visible, ca 4m diam.

outside measure. In the centre an oblong sand-filled depression E-W oriented (Thorvildsen 1991).

**Grave 4** (no longer exists): Mound 6 m diam. and ca 1 m high. Ring wall 1 m high visible on the E-SE side. Located on the northern edge of the south plateau (Thorvildsen 1991).

It seems that none of this group (1 - 4) was a multi-chamber grave and according to their heights they cannot be Hafit type graves or even a transition between Hafit and Umm an-Nar (see earlier discussion). Though not seen by the writer before destruction, it seems that like most of the other graves on the main plateau, this group was not denuded of their original stones.



UNR 005 Looking south.

Grave: 5.



UNR 006 Looking north.

Grave: 6.

**Grave 5:** N 24.43681, E 054.51182

Mound 5 m in diam. and ca. 1 m high. Single chamber located on the south edge of the north plateau. Its southern footing has slid down the slope. Single chamber (?). Disturbance in the centre of the chamber and the eastern side. Built of beach rocks.

**Grave 6:** N 24.43791, E 054.51073

Mound 5 m diam. and ca. 0.75 high. Single chamber located near the west side of the plateau, south of a larger group of tombs.



UNR 007 Looking north.

Grave: 7.



UNR 007a

Grave: 7a.

**Grave 7:** N 24.43818, E 054.51101

A small round tomb 2.50 - 3 m diam. and ca 0.50 m high.

**Grave 7 a:** N 24.43821, E 054.51097

A small cairn 2 x 2 m. and 0.40 m. high.



UNR 008 Looking north.

Grave: 8.



UNR 009 Looking north.

Grave: 9.

**Grave 8:** N 24.43818, E 054.51091

Mound 2.5 m diam. and ca 0.50 m high with a projection on the northwest side.

**Grave 9:** N 24.43823, E 054.51086

Mound 3 x 3.80 m diam. and ca 0.40 m high with a cut in the north side. It has a projection on the northeast side perhaps as a result of a destruction.

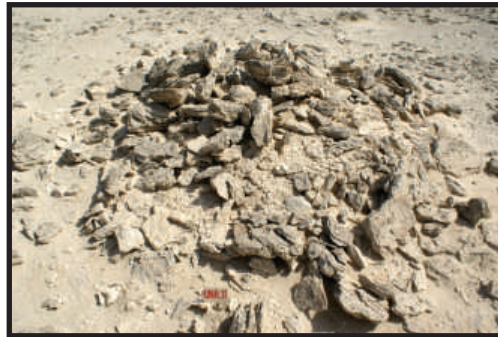


UNR 010 Looking north.

Grave: 10.

**Grave 10:** N 24.43830, E 054.51086

Mound 4 - 5 m diam. and ca 0.80 m high. Single chamber



UNR 011 Looking north.

Grave: 11.

**Grave 11:** N 24.43833, E 054.51090

Mound 4.30 m diam. and ca 0.80 m high. Single chamber



UNR 012.

Grave: 12.

**Grave 12:** N 24.43830, E 054.51102

Mound 5.50 m diam. and ca 1 m high. Single chamber



UNR 013 Looking north.

Grave: 13.

**Grave 13:** N 24.43822, E 054.51126

Mound 4 - 5 m diam. and ca 1 m high. Single chamber grave located east of a much larger group of tombs.



UNR 014 Looking south.

Grave: 14.

**Grave 14:** N 24.43825, E 054.51126

Mound 2 - 3 m diam. and ca 0.25 m high



UNR 014a Looking south.

Grave: 14a.

**Grave 14 a:** Coordinates as above

Shallow mound about 1.50 x 1.50 m and 0.30 m above the ground. It might be a child's grave.



UNR 015 Looking south (tombs 16 and 17 are shown in the background).

Grave: 15.

**Grave 15:** N 24.43875, E 054.51215

Mound ca 5 m diam. and ca 0.80 m high. Hard beech flat rocks. Perhaps 3 m wide chamber, no dressed stones. (one or two chambers...?)



UNR 016 Looking north.

Grave: 16.

**Grave 16:** N 24.43861, E 054.51231

Mound 5.5 m diam. and ca. 0.80 m high. Two chamber grave. In the centre a flat sand depression with traces of a wall running W-E attached to the ring wall from the west and stops short before the east side of the outer wall. This might be similar to Tomb VI. Little destruction in the centre and eastern side of the ring wall.



UNR 017 Looking south.

Grave: 17.

**Grave 17:** N 24.43833, E 054.51235

Excavated and called Tomb XI, (Iraqi internal report calls it the 'Third Tomb'): Before excavations it was a mound 6 m diam. and ca 1.25 m high with a remaining ring wall of about 6 - 7 courses on the north side collapsed towards the centre. Excavations revealed an oval single chamber (2.10 x 1.80 m inside). Outside measurements 3.50 - 4. Built of hard rocks like those covering the surface of the plateau. Only 3 courses of the southern side of the wall remained. Though not mentioned in the excavation report, it has what looks like a blocked entrance from the south (0.60 wide).



UNR 018 Looking east.

Grave: 18.

**Grave 18:** N 24.43670, E 054.51283

Mound 7 x 6 m diam. and ca 1.25 high. Located on the eastern side of the plateau with steep slopes towards north, east and south. Ring wall ca 5 m (outside diam.) with 4 courses in places on its east side. Based on the diameter of the ring wall it should have 2 chambers or more. Covered by large flat slabs. Surrounded by the cliff from three sides and open towards the fourth side (west). A pit ca 1.20 m wide noticed in its northern side. Beach rocks used without any evidence of sugar lump stones.



UNR 019 (Tomb 18 is shown in the background).

Grave: 19.

**Grave 19:** N 24.43686, E 054.51281

Mound 4 x 5 m diam. and ca 0.50 m high located to the north of Grave 18 on the eastern edge of the same plateau which is badly eroded. Steep slopes from two sides. Built of beach rocks and should be a single chamber grave.



UNR 020 Looking north.

Grave: 20.

**Grave 20:** N 24.43804, E 054.51299

Mound 5 - 6 m diam. and ca 0.60 m high. Ring wall 3-4 m outside diam. clearly visible on the NW side. Disturbed at the centre and at its eastern wall. Western section of the ring wall is preserved.



UNR 021 Looking north.

Grave: 21.

**Grave 21:** N 24.43804, E 054.51305

Mound 6 m diam. and ca 0.80 m high. Ring wall 3-4 m diam. and visible in several places. Should be a single chamber with a diam. of 2 - 2.50 m.



UNR 022 Looking north.

Grave: 22.

**Grave 22:** N 24.43804, E 054.51316

Excavated by the Iraqis and called XII (Iraqi internal report calls it the 'Fourth Tomb'). Mound 7 m diam. and ca 0.40 - 0.70 m high. Ring wall is visible on SSW side. Single chamber 2 x 1.60 m (NW-SE) getting narrower at the southeast where a possible blocked entrance is located. Only three to five courses of the ring wall are found preserved.



UNR 023 Looking north.

Grave: 23.

**Grave 23:** N 24.43793, E 054.51338

Mound 8 m diam. and 1 m high. Walls collapsed outwards and inwards visible on the east side from the top of the mound. The mound is damaged from the Southeast side so it is difficult to confirm whether it has an extramural grave attached to it or not. Inside diam. of the attached grave (?) ca. 1 m making the total length 9 m.



UNR 024 Looking north.

Grave: 24.

**Grave 24:** N 24.43806, E 054.51325

Mound 5.50 m in diam. and ca 0.80 m high. Wall visible on the NW side, collapsed. Sand-filled depression in the centre (Thorvildsen 1991). Single-chambered tomb



UNR 025 Looking southwest.

Grave: 25.



UNR 026 Looking north.

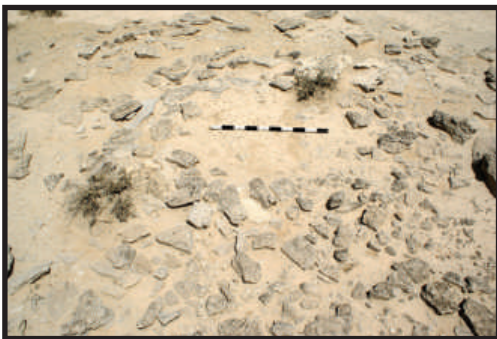
Grave: 26.

**Grave 25:** N 24.43812, E 054.51323

Mound joined to grave 26. Ring wall with an outer diam. of ca. 2.50 m visible in 3 courses on N side. This small grave might have 2 ring walls. In the space between 24 and 25 there might be another shallow grave (or just fallen stones from these two graves).

**Grave 26:** N 24.43814, E 054.51320

Mound 5 m diam. and ca 1 m high. Attached to 25. Ring wall is partly visible and collapsed towards the centre. Sand pit (0.80 m x 1.20 m). Like most of the other tombs beach rocks used.



UNR 026a Looking north.

Grave: 26a.

**Grave 26 a:** N 24.43819, E 54.51318

Very shallow and much destroyed 'grave' with one course left encircling a chamber of 1.50 m in diameter. Sporadic stones are scattered around the chamber in a circle of 5 - 6 metres. This 'grave' was not recorded by Thorvildsen, and I do not know whether he missed it or it is a modern structure made by somebody to confuse the archaeologists.



UNR 027 (Tomb XIII) Looking north.

Grave: 27.

**Grave 27:** N 24.43845, E 054.51303

Excavated by the Iraqis and called Tomb XIII (Iraqi internal report calls it the 'Fifth Tomb'). Before excavations it was a mound of 6 m diam. and 1 m high. Single chamber, oval in shape, 2 m (N-S) and 1.60 m (E-W), outside measurements 3 x 4 m. Height 0.50 - 0.70 m, preserved up to 4 - 5 courses. Blocked entrance facing south.



UNR 028 Looking north.

Grave: 28.

**Grave 28:** N 24.43834, E 054.51336

Mound 4.30 x 4.60 m diam. and ca 0.40 m high. Ring wall 2 - 3 m outside diam. just visible. Disturbed and plundered. Shallow sand pit in the centre covering the whole chamber. Plundering does not seem to have reached the floor level.



UNR 029 Looking north.

Grave: 29.

**Grave 29:** N 24.43848, E 054.51357

Mound 7 m diam. and ca 1.15 m high. Half circle modern structure made on its NE side.



UNR 030 Looking north.

Grave: 30.

**Grave 30:** N 24.43832, E 054.51347

Mound 8 - 8.50 m diam. and ca. 1 m high. Flat top filled with rocks on sand. Should be multi-chambered.



UNR 031 Looking north.

Grave: 31.

**Grave 31:** N 24.43820, E 054.51349

Mound 7.50 m diam. and ca 1 m high. Walls collapsed inside, visible at the top towards NE. Large flat rocks used. Multi chambered grave.



UNR 032 Looking southwest.

Grave: 32.

**Grave 32:** N 24.43804, E 054.51392

Round structure, 9-10 m diam. Partly excavated and/or plundered, 2 chambers (interior diam. 3.5 - 4 m). Height 1.30 m. Eastern chamber is completely exposed. No visible indication for entrance but should be facing south. Built of beach rocks. Excavated earth mixed with bleached bones and a few fragments of fine red ware are dumped on the ring wall from the east which gives the impression that the tomb had been plundered, not excavated by archaeologists. Direction of the crosswall is NW-SE not E-W as mentioned by Thorvildsen. Built of flat solid heavy rocks without evidence of sugar lump stones.



UNR 034 Looking north.

Grave: 34.

**Grave 34:** N 24.43809, E 054.51395

11 m in diam. and ca 1.50 m high, Thorvildsen thinks it has 4 chambers but its right-angled walls might form 6 chambers (?). Interior diam. around 7 m. Stones collapsed into chambers, well preserved and shows no evidence of recent plundering. Built of faroosh (beach rocks). Merged into G 32.



UNR 033 Looking north.

Grave: 33.

**Grave 33:** N 24.43810, E 054.51389

A small pile of stones, diam. 3 - 3.40 m. Height 0.60 - 0.70 m, interior 1.80 m collapsed inside, stones slid vertically, built of beach rocks, should be a single chamber grave. Little evidence for entrance at the southwest end where a large thin slab is slid inside (logical as the grave is surrounded by two other graves, 32 and 34).



UNR 035 Looking north.

Grave: 35.

**Grave 35:** N 24.43817, E 054.51405

Single chambered round grave, interior diam. 2.50 m, original height mentioned by Thorvildsen 1.25 m, present height is around 0.75 m. Slight evidence of disturbed entrance at the southern part of the ring wall. Badly plundered, it was already emptied when the aerial photo, published by Dr. Frifelt (1991: Fig. 6), was taken in 1972. Bleached bones are scattered on the ring wall. The plunderers might have not reached the actual floor, as the present level is still slightly higher than the bedrock. Some large stones are still fallen inside.

**Note:** Although there is no excavated earth randomly dumped around the tomb, it seems that the grave was plundered. The nearest dump is down the slope of the cliff which is only 10 m away. It should be noted however that the Umm an-Nar island was opened to the public by then and ravagers were reported to have been active.



UNR 036 Looking north.

Grave: 36.

**Grave 36:** N 24.43826 , E 054.51407

A pile of stone 4.50 - 5 m diam. and 1 m height. Must be a single chambered grave (not touched). Like graves 32, 33, 34 and 35 beach rocks used here.



UNR 037 (Tomb V) Looking north.

Grave: 37.

**Grave 37:** N 24.43823, E 054.51422

(Moesgard Museum registration No. 1089. Published as Grave V.) Excavated in 1960 and according to Thorvildsen it was merged with Grave 38 (distance between the two measured after excavations only 1.50 m). Diam. see excavation report. Sitting on a 20-30 cm thick plinth of stone. Restored. Entrances are in the same locations as original, N-S but the gaps in the interior side of the ring wall are not correctly built as they partly block the access to the inside. Present ht 1.30 m from the top of the plinth. Thickness of the original stones 10 - 20 cm, length 20 - 60 cm. Thicker stones used in the lower courses.



UNR 038 (Tomb VI) Looking northwest.

Grave: 38.

**Grave 38:** N 24.43833, E 054.51418

(Moesgard Museum registration No. 1090. Published as Grave VI). Excavated in 1960. Before excavations it was merged into nos. 37 and 39. Ring wall 5.50 m diam. E-W cross wall up to 1.30 m high dividing the tomb into two chambers. Faroosh rocks (Beach rocks). Floors paved. Finds included pottery, beads, copper and skeletal remains. Distance to **Grave 37** is only 1.70 m. No dressed stones. Restored by the Iraqi Restoration Team.



UNR 039 (Tomb VII) Looking north.

Grave: 39.

**Grave 39:** N 24.43835, E 054.51418

(Moesgard Museum registration No. 1091. Published as Grave VII). Excavated in 1960. Before excavations it was merged with no 38. Ring wall with 3 m outer diam. and up to 0.65 high. Faroosh (Beach rocks) used. Finds included pottery and skeletal remains. Distance from Grave 38 is one metre only. No visible entrance but there is little evidence of a blocked one at the eastern side of the wall.



UNR 040 (Tomb VIII) Looking north.

Grave: 40.

**Grave 40:** N 24.43834, E 054.51427

(Moesgard Museum registration No. 1092. Published as Grave VIII). Excavated in 1960. Ring wall 1.50 m outer diam. and only 0.25 m high. No finds. Built of rough flat stones. Distance to G 38 is 3.50 m.



UNR 041 (Tomb IV) Looking Northwest

Grave: 41.

**Grave 41:** N 24.43840, E 054.51423

(Moesgard Museum registration No. 1088. Published as Grave IV). Excavated in 1960. Ring wall with 8.30 m diam. and up to 1 m high. Existing height is 0.70 m. Crosswalls divide the grave into 4 chambers with E-W centre passage. Finds included pottery and a few skeletal remains. Entrance facing SE. Rocks are mixed and rich in shells. Restored by the Iraqi restoration team. No mortar used. Fallen stones were placed back on the walls by the Department of Antiquities and Tourism.



UNR 042 (Tomb IX).

Grave: 42.

**Grave 42:** N 24.43855, E 054.51419

Excavated by the Iraqis, called Tomb IX (Iraqi internal report calls it the 'First Tomb'). Originally it was a mound of 20 m diam. and ca. 2.25 high. Ring wall ca. 11.60 m outer diam. with dressed blocks but only a few were visible as the mound was subjected to some stone plundering, according to Thorvildsen. Distance is about 9 m from G 41. Not restored.



UNR 043 (Tomb II) Looking north.

Grave: 43.

**Grave 43:** N 24.43888, E 054.51421

(Moesgard Museum registration No. 1011. Published as Grave II). Mound of 18 m in diam. and ca. 2.25 m high. Excavated in 1959-1961. Ashlar ring wall 12 m. outer diam. Crosswall system N-S and E-W. Door stones and picture stones in low relief. Finds included pottery, beads, copper daggers and skeletal remains. Restored by the Iraqi restoration team in 1972.



UNR 044 (Tomb X) Looking south.

Grave: 44.

**Grave 44:** N 24.43891, E 054.51448

Excavated by the Iraqis and called Tomb X (Iraqi internal report calls it the 'Second Tomb'). Before excavations it was according to Thorvildsen a mound of 14 m diam. and 2.50 m high. Ashlar ring wall. Diam. of the ring wall after excavations is 8.75 m. Crosswall system, right-angled, N-S and E-W. Less sophisticated than the architecture of Grave X. Similar stones but smaller and less accuracy in cutting. Not restored.



UNR 045 (Tomb I) Looking south.

Grave: 45.

**Grave 45:** N 24.43969, E 054.51425

(Moesgard Museum registration No. 1010. Published as Grave I). Excavated in 1959-1960. Ashlar ring wall 11 m outer diam. Crosswall system up to 1.25 m high dividing the tomb into 8 chambers. Central passage N-S. Door-stones with handle. Finds included pottery, beads, and skeletal remains. Restored by the Iraqi restoration team in 1971.



UNR 046 Looking northeast.

Grave: 46.

**Grave 46:** N 24.43993, E 054.51431

Mound 15 m diam. and ca. 1.75 high. No walls or dressed stones visible after stone plundering in recent times. A number of recent plundered shallow pits are visible. Size indicates a dressed stone tomb (?) Multi-chambered tomb. Difficult to understand the interior plan without excavations. The grave has been denuded from its top loose stones.



UNR 047 Looking northeast (UNR 048 is shown in the background).

Grave: 47.

**Grave 47:** N 24.44013, E 054.51464

Mound 8 m diam. and 1.15 m high. Evidence of stone robbing. Single chamber.

**Grave 48:** N 24.44019, E 054.51478

Mound 4 - 5 m diam. and ca. 0.40 m high. Evidence of stone robbing. Similar to G 47 but smaller. Used as a fox hole in recent times (Photo not available).

**Grave 49:** (No longer exist). According to Thorvildsen this is a mound 10 - 12 m diam. and ca. 1.50 m high. Ashlar ring wall ca. 8-9 m outer diam. built of rectangular blocks up to 1.75 long, has suffered from stone robbing in recent times. Located beyond a depression on a narrow plateau at the northern end of the island. Unfortunately, this grave was bulldozed during the construction of the new roads (Photo not available).

### UNREGISTERED GRAVES BY THORVILDSSEN

This is a small and shallow group of three tombs located at the north side of the plateau around 50 m west of the modern water cistern. They were not noticed by Thorvildsen, presumably because of their shallow heights.



UNR 050 Looking north.

Grave: 50.

#### Grave 50: N 24.43994, E 054.51256

Small mound with flattish top 5 m diam. and ca. 0.30 - 0.50 m above the ground. No large stones, may have been removed when the modern nearby water cistern built. A few small fragments of red-on-black pottery noticed on the surface.



UNR 051 Looking north.

Grave: 51.

#### Grave 51: N 24.43998, E 054.51261

Slightly higher than G 50. Only 0.60 m high. High top in the centre and shallow flat sides. Wide spread debris. Two tiny fragments of reddish thick and coarse pottery might indicate an earlier phase (?).



UNR 052 Looking north (bulldozed).

Grave: 52.

#### Grave 52: N 24.44000, E 054.51269

Mound larger than G 50 and 51 but unfortunately has been heavily damaged. It was subjected to bulldozing and the debris of the eastern bulldozed section pushed on top of the other half. Only a small portion left which shows a shallow mound like the former ones.

## FOOTNOTES

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1. The first collection of stone artifacts from Jebel Barakah was made by Sally McBrearty in the early 1990s. Because of lack of diagnostic tools from her collection McBrearty suggested several dates for the assemblage, including probably Acheulean, the Middle Stone Age and Mid-to Late- Holocene. See McBrearty 'Earliest stone tools from the Emirate of Abu Dhabi, United Arab Emirates' in *Fossils Vertebrates of Arabia*, P J Whybrow and A Hill (eds.), Yale University Press 1999, pp. 373-88. For the recent assemblage made at Jebel Barakah see G Wahida, W al-Tikriti, M Beech and A al-Meqbali 'A middle Paleolithic assemblage from Jebel Barakah, coastal Abu Dhabi Emirate', in *The Evolution of Human Populations in Arabia*, M D Petraglia and J I Rose (eds.), Springer Dordrecht Heidelberg London New York, 2009, pp. 117-124.
2. Defining the phases of the Bronze Age in the United Arab Emirates and Oman is still controversial and the subject has to be reconsidered. Some archaeologists consider the whole culture of Umm an-Nar as an early phase without taking the Hafit Period (3200 - 2700 BC), which witnessed the first attempt for the copper exploitation, and the length of the UN period (seven centuries) in consideration. Do we need to comply with the sub-divisions of the Bronze Age adapted for the Levant? This is another question.
3. It should be mentioned here that the Iraqi archeological team at Delma partly excavated in 1975 a building of thick plastered walls dated by the excavator as a Late Islamic house, based on the few potsherds discovered. This building, unfortunately was not published but has been mistakenly referred to as Sassanian by Serge Cleuziou who was quoted a number of times by ADIAS team and others.
4. The southern section, which is today occupied by the Umm an-Nar Oil Refinery is the highest point on the island. Originally, only four stone cairns existed on that part. Although none of them was excavated before destruction it seems that they were single chamber graves built of rough stones.
5. According to the inscription carved the cistern was built in 1349 Hijra (1930 AD) by Hareb Al Otaiba. The builder "Ali bin ..(missing).. Al Balouchi" did not forget to write his name as well.
6. The only known high ground in Abu Dhabi island is the small outcrop at Khalidiya which is used as a cemetery by the royal family.
7. See Evans G, Schmidt V, Bush P and Nelson H, 'Stratigraphy and geologic history of the sabkha, Abu Dhabi, Persian Gulf', *Sedimentology*, 12, 1969, pp.145-159.
8. Carter R. 2000, "New evidence for the medieval occupation of Abu Dhabi" *Tribulus* 10.1, pp 10-11.
9. The author would like to thank Susan Hillyard for providing him with a copy of her memoir on the visit she made to the island with her husband, Tim Hillyard, Professor Globe and Mr. Geoffrey Biby.
10. The first involvement of the Danes in the archaeological explorations in the Arabian Gulf was in Bahrain in 1953.
11. I wonder why this mound was called 1014 not 1013, as the first trial trench opened at settlement in 1959 was here at Mound A not C (see Frifelt, 1995: 9, 40 and 92). In order not to confuse the reader I recommend to ignore these numbers and stick to the alphabetical letters (A, B and C) for the settlement, and to the Roman numbers (I - XIII) for the tombs.
12. During the restoration work which we carried out at the settlement in the mid 1990s we examined the dumps of the Danish and Iraqi teams at Mound A and separated the rocks from the earth, which was partly sifted as well. The result was making one large pile of rocks and two small ones, in addition to the discovery of a fairly large collection of animal bones and fragments of pottery.
13. This stone is on display in the Al Ain National Museum.

14. A temple from the Iron Age (1st millennium B.C.) has been discovered recently by a French team led by Anne Benois at Bithna, Fujairah. A second temple from the beginning of the first century A.D.) was excavated at Ed Dur in Umm Al Quwain by a Belgian team headed by E Haerinck.
15. These two layers were also identified at the house complex excavated at the same mound by the Danish archaeologists.
16. I was told that some of the Arish type houses in Al Ain were replaced by mudbrick houses when pearling in the Gulf was at its boom.
17. The author would like to thank Dr. Margarethe Uerpmann for identifying the most recent collection made during the restoration work carried out on the site in mid 1990s. See Uerpmann and Uerpmann 'Animal Economy during the Early Bronze Age in South-East Arabia'. In E Vila, L Gourichon, A M Choyke and H Buitenhuis (eds.), *Archaeozoology of the Near East VIII/TMO 49*, Maison de Orient et de la Mediterranee, Lyon 2008, pp. 465-485.
18. The clay figurine of a camel with the harness from the Iron Age site of Moweilih is a good archaeological evidence for the domestication of the animal of course. Nevertheless, we should ask ourselves the following questions. Were the Iron Age people the first to domesticate the camel? What was the priority for domestication? For milk or a beast of burden? How long did it take ancient communities, who had donkeys for their transport, to use the camel for heavy work and/or transport? All these questions, and others, should be kept in mind and we should not exclude the tenuous hints for earlier domestication.
19. For details see Frifelt 1995, pp. 226-230. The author would also like to thank Prof. J Connan who has kindly analysed samples collected in mid 1990s.
20. The Danish excavators skipped number III and gave it 'to a trial trench through a settlement mound at the beach' (Frifelt 1991, p. 21).
21. KUMJ is the journal of the Jutland Archaeological Society.
22. The topic was "Reconsideration of the Late Fourth and Third Millennium B.C. in the Arabian Gulf with Special Reference to the U.A.E.", Trinity College, University of Cambridge, 1981.
23. The Danish catalogue shows 35 vessels of black-on-red, grey and plain rounded vessels usually with broad folded rims; a type considered of Mesopotamian origin (see Frifelt 1991, Figures 59-92).
24. These measurements which are not much different from those mentioned by Frifelt (1991) were taken by the author after reconstruction.
25. For the pottery vessels from Tomb V see Frifelt, 1991, figures 138-191.
26. I looked for this stone but unfortunately did not find it in the grave.
27. Vogt B. 1985, *Zur Chronologie und Entwicklung der Gräber des späten 4-2 Jt v. Chr. Auf der Halbinsel Oman: Zusammenfassung, Analyse und Würdigung publizierter wie auch unveröffentlichter Grabungsergebnisse*. Unpublished Ph.D thesis, George-August Universität, Göttingen.
28. See McSweeney C, Mery S. and Macchiarelli R. Re-writing the end of the Early Bronze Age in the United Arab Emirates through the anthropological and artefactual evaluation of two collective Umm an-Nar graves at Hili (eastern region of Abu Dhabi). *Arabian Archaeology and Epigraphy* 19: 10, 2008.

29. The team was led by Mr. Shah Al Siwani who formerly carried out a number of restorations at the City of Hatra in northwest Iraq.
30. Hili Grand Tomb was reconstructed by another restoration team from Iraq led by Tawfiq Beder, an architect.
31. These were mainly carried out in 1995 and 1996. Mr. Mahmood Najib and Mr. Taisir Ouda, former members of the department were in charge, while Mr. Ahmed Abdullah Al Haj looked after repairing the interior walls of the tombs.
32. It was late Sheikh Zayed who showed the Danish team Hasat al Barja (the sitting stone) which is now called Hili Grand Tomb designated as site 1059 by the Danes.
33. On the available contour maps scale 1/2500 which cover 4.5 km length of this ridge the writer previously identified 905 graves. Actual number might exceed 1000 as the survey did not cover the southern most section of the ridge(s). Although these mainly belong to Hafit type graves others might belong to middle 3rd and 2nd mill. BC. None have been legally excavated but the writer noticed a partly uncovered grave with evidence of a partition wall in the middle reminiscent of type B on Umm an-Nar.
34. See Al Tikriti 'The Archaeological Investigations on Ghanadha Island 1982-1984: further evidence for the coastal Umm an-Nar Culture'. *Archaeology in the United Arab Emirates*, Volume IV, 1985:9-19.
35. See Potts D. A *prehistoric Mound in the Emirate of Umm al-Quwain, U.A.E. Excavations in Tell Abraq 1989*, Copenhagen. 1990. See also "Further excavations in Tell Abraq: the 1990 season", Copenhagen 1991.
36. See Eddisford D. and Phillips C. 'Kalba in the third millennium (Emirate of Sharjah, UAE)', *Proceedings of the Seminar for Arabian Studies*, vol. 39. 2009.
37. Bidya 2 was one of five sites discovered by the writer in 1987. Four of them belong to the Bronze Age and one to the Late Islamic. See 'The Excavations at Bidya, Fujairah: the 3rd and 2nd millennia BC Culture', *Archaeology in the United Arab Emirates*, Volume V, 1989:101-114.
38. See Vogt B., Gockel W., Hofbauer H. And Al-Haj A. 'The Coastal Survey in the Western Province of Abu Dhabi, 1983', *Archaeology in the United Arab Emirates*, Volume V, 1989: 49-60.
39. See Lacono N., Weeks L and Davis K. 'The settlement (Areas A-D)'. In Benton J.N, ed. *Excavations at al Sufouh. A third Millennium site in the Emirate of Dubai* (Abiel I). Leiden: Brepols, 1996: 24-33.
40. See Phillips C. 'The third-millennium tombs and settlements at Mowaihat in the Emirate of Ajman, U.A.E.', *Arabian Archaeology and Epigraphy*: 18, 2007: 1-7.
41. See Al Tikriti 'Umm an-Nar Culture in the Northern Emirates: Third Millennium tombs at Ajman'. *Archaeology in the United Arab Emirates*, Volume V, 1989: 89-99. See also Haerinck E. 'The rectangular Umm an-Nar Period grave at Mowaihat (Emirate of Ajman, United Arab Emirates)', *Gentse Bijdragen, tot de Kunstgeschiedenis en Oudheidkunde* 29, 1991: 1-30.
42. See Sahn N. Preliminary report of the *Excavation of the Umm an-Nar tomb in Shimal North*. In Castner J-M, Sahn N. and Velde C., eds. *Excavations of the German Archaeological Mission to Ras al-Khaima: Report of the fourth season 1988*, Gottingen, 1988, Unpublished.
43. I would like to thank Dr. Husain Qandil for showing me an Umm an-Nar tomb of Type A at Hatta, in the interior of Dubai.

44. See Benton J.N. Excavations at al Sufouh. A third Millennium site in the Emirate of Dubai (*Abiel I*) Leiden: Brepols 1996.
45. See Benton J.N. and Potts D.T. Jabal al-Emalah 1993/94: Report compiled for the Department of Culture and Information, Government of Sharjah, U.A.E. 1994.
46. See Potts D. *Ancient Magan: The Secrets of Tell Abraq*. Trident Press Ltd. London 2000.
47. See Jasim S. 'The Third Millennium Culture in the Emirate of Sharjah. In *Archaeology of the United Arab Emirates: Proceedings of the first international Conference on the archaeology of the U.A.E.*, Editors: Daniel Potts, Hassan Al Naboodah and Peter Hellyer, p 86-99, Trident Press Ltd., London, 2003.
48. See Vogt B. *Asima, An account of a two months rescue excavation in the mountains of Ras Al Khaima, United Arab Emirates*. Ras Al Khaima: Department of Antiquities and Museums, 1994.
49. See Beech M., Kallweit H. and Hellyer P. 'New archaeological investigations at Abu Dhabi Airport, United Arab Emirates', *Proceedings of the Seminar for Arabian Studies*, 2004, 34: 1-15.
50. See De Cardi B. 'Third Millennium and Latter Pottery from Abu Dhabi Airport', in *Arabian Archaeology and Epigraphy*, 1997, 8-2: 161-173.
51. See Hellyer P., *Hidden Riches: An Archaeological Introduction to the United Arab Emirates*, published by Union National Bank, Abu Dhabi, 1998.
52. I am using the term 'desert site' although it is not always accurate considering the wetter climate the region enjoyed during the 3rd millennium BC.
53. Many sites in the Gulf region mainly prehistoric denuded of their surface findings by irresponsible amateurs.

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